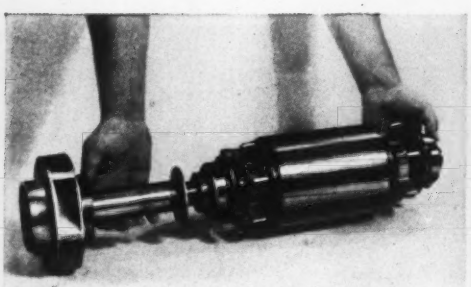
ENGINEERING NEWS-RECORD

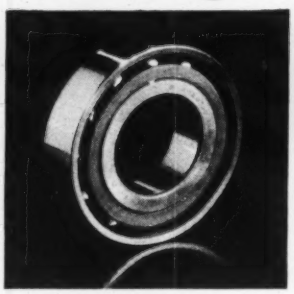
rst train crosses Kentucky Dam, largest flood control structure in the TVA system.

UNIVERSITY OF MICHIGAN
GENERAL LIBRARY
ANN ARBOR MICH

PUMP TIPS FROM ALLIS-CHALMERS—ONE IN A SERIES

How to make CENTRIFUGAL PUMPS Last Longer...

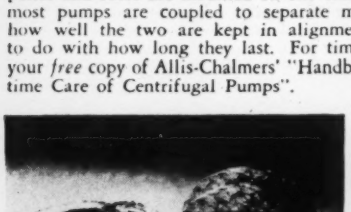


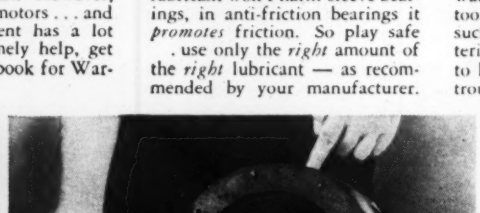


1 WHEN YOU HAVE an A-C "Electrifugal" pump you don't have alignment problems, for *both* impeller and rotor are mounted on *one* shaft. However, most pumps are coupled to separate motors . . . and how well the two are kept in alignment has a lot to do with how long they last. For timely help, get your *free* copy of Allis-Chalmers' "Handbook for Wartime Care of Centrifugal Pumps".

2 ALL BEARINGS AREN'T ALIKE. For example, while too much lubricant won't harm sleeve bearings, in anti-friction bearings it *promotes* friction. So play safe . use only the *right* amount of the *right* lubricant — as recommended by your manufacturer.

3 SLEEVES WEAR UNDULY when water piping is plugged, lantern ring displ water is dirty or stuffing box gland is too tightly. By keeping a constant check such sources of wear, sleeve life can be terially lengthened. For valuable tips on to locate, how to remedy these and other p troubles, consult the "Handbook".





4 THE KIND OF PACKING, and *how* you use it have a lot to do with how long your pumps last. Commonest cause of trouble traces back to lack of "know-how" in caring for stuffing boxes. A quick picture of the *how* and *why* of efficient packing can be found in the "Handbook".

5 AN OFTEN OVERLOOKED CAUSE of impeller and casing wear is cavitation. For if a pump's capacity, head and particularly, suction lift aren't figured properly, this enemy can eat vital parts away fast. Allis-Chalmers' "Handbook for Wartime Care of Centrifugal Pumps" contains a step-by-step method for figuring head, plus tables of losses to help you apply your pumps correctly.

TODAY, with pumps w ing harder than ever replacements difficult to ob you can't afford to take cha on maintenance. That's Allis-Chalmers has published "Handbook for Wartime C of Centrifugal Pumps".

Write for your *free* cop this valuable book today! I plies to *all* makes of pumps; tains *no* advertising.

And when you *do* need pumps, look into the extra ciency of A-C centrifugal pu ... the "Electrifugal", and types for every purpose. AL CHALMERS, MILWAUKEE.

ALLIS-CHALMERS PUMPS

Allis-Chalmers builds all types and variations of pumps shown at right. Capacities from 10 to 150,000 gpm—heads to 2500 lbs.

The Week In Engineering and Construction

GINEERING NEWS-RECORD • NOVEMBER 23, 1944 • VOLUME 133 • NUMBER 21

Public works appropriations to spur postwar plans

Federal Works Administrator Fleming tells New Jersey municipal officials that planning funds for states, cities and other subdivisions are forthcoming soon

t funds will be appropriated be- Jan. 1 for plans for public con- ion that might amount to more $5,000,000,000 in the first year ace was the prediction of Maj. Philip B. Fleming, Federal Works inistrator, in speaking at the an- conference of the New Jersey League of Municipalities in New City on Nov. 16.

this, his first public address since ecent return from a visit to Europe, he studied the postwar planning rams of Russia, France and Eng- General Fleming gave assurance federal financial aid would be available soon to states, cities other political subdivisions to late plans for a vast postwar pub- orks construction program. The rity for such appropriations is d in Title V of the War Mobiliza- and Reconversion Act of 1944, the Federal Works Adminis- n said authorizes the Federal s Administrator to make, from appropriated for that purpose, or advances to the states and agencies and political subdivisions d in financing the cost of archi- ral, engineering and economic tigations and studies, surveys, de- plans, working drawings, spe- tions, procedures and other action minary to the construction of pub- orks—housing excluded. To be le, a project must conform to an ll state, local or regional plan ved by the appropriate authority.

Priority for ready projects

o appropriation has yet been ap- d to implement this program, but e assuming that it will be pro- in the first deficiency bill, which likelihood will be passed before st of the year," he declared.

cording to General Fleming, it is probable that priority will be given to such projects as can be put into operation without delay and for which the financing is already arranged or in sight. Preference will be given also, General Fleming said, to "those projects that will make the largest immediate contribution to community welfare and health, such as sewer systems, waterworks or a hospital, rather than a monumental public auditorium or a football stadium."

The responsibility for the designs of projects submitted, the administrator said, will rest with state and municipal officials and the "timing" of construction is to be considered. That means, he explained, holding back where necessary to avoid coming into competition with private business for men and materials.

A billion for highways

"It seems certain," the general declared, "that state and federal-aid highway work will account for about $1,000,000,000 worth of the new construction. Direct federal projects—river and harbors work, post offices and other buildings, flood control, irrigation, and so on—should account for about a half billion in addition, leaving three and a half billion dollars worth of work, other than highways, which states, counties, cities and special districts should be prepared to carry out. Of this three and a half billion, plans for almost a billion already are completed, or nearing completion. That leaves two and a half billion yet to go."

England's planning

In speaking of his recent survey of European conditions and construction plans, General Fleming emphasized England's postwar plans. He said: "England seems far more planning-

(*Continued on page* 3)

First train passes over TVA's Kentucky Dam

The first train crosses Kentucky Dam, signalizing another step in completion of Tennessee Valley Authority's largest flood control reservoir. The Illinois Central R.R. formerly crossed the Tennessee River just upstream from the dam but the crossing has now been shifted to the high concrete dam. The former Illinois Central bridge is being relocated for use as another railroad crossing farther upstream in the reservoir.

Bargaining position of engineers clarified by NWLB chairman

William H. Davis recommends that the American Society of Civil Engineers continue its study of collective bargaining

Professional employees must be prepared to bargain collectively and do it effectively if they are to maintain their standing, William H. Davis, chairman of the National War Labor Board, told the Metropolitan Section of the American Society of Civil Engineers at a meeting held in New York on Nov. 15. Many of the questions that have been raised in connection with the A.S.C.E. program for aiding employee engineers to set up their own collective bargaining units were discussed by Mr. Davis, and many were clarified.

Society can act

Most significant of Mr. Davis' statements were those to the effect that the A.S.C.E. can foster the formation of collective-bargaining units made up of engineering employees without having any prejudicial effect on those bargaining units, that it can spend its funds on such work and can employ legal counsel to aid bargaining units in establishing their rights. Employers can be members of the groups set up within the society to deal with matters relating to employment matters, but they cannot participate in collective bargaining by the bargaining units.

Mr. Davis urged the society to study the subject actively and to review the experience of professional workers in England and Sweden.

Some risks involved

Asked specifically as to his views on the plan of action approved by the A.S.C.E. board of direction in October of last year, Mr. Davis said that such a plan held both grave dangers and great possibilities. Its dangers, he said, lay in possible failure to recognize that employer members can have no say in what the employee groups do. He suggested that the society might recognize the need for such a limit on the men on the management side by adoption of a formal resolution or by amendment to its code of ethics.

A major advantage of such an arrangement, Mr. Davis said, lay in the fact that a study of problems affecting labor and management by the society would make both employer and employee members more conscious of those problems and so should tend to eliminate conflicts between employees and employers within the society itself.

It is important for a society like the A.S.C.E. to recognize, Mr. Davis added, that when collective bargaining becomes necessary, employer members will be sitting on one side of the table and employees on the other. If frankly recognized, that condition should be no bar against the same men joining in social affairs at society meetings or participating in social activities. A definite plan should foster rather than reduce harmony between employers and employees within the society.

Professional workers position

Professional workers, said Mr. Davis, are in a difficult position between management and production workers. The theory that their position is an impartial one, he added, finds little support in actual practice. Their functions sometimes are managerial, and the National Labor Relations Board has quite generally recognized that their ethical and economic outlook is so different from that of production workers as to make separate bargaining groups for them a logical arrangement.

However, profession employees will not be given separate recognition automatically, Mr. Davis said. When employees of a company are being organized, professional employees must declare their desire for separate recognition and must be prepared to get a majority of their group to vote for such recogntion.

Mr. Davis indicated that in his opinion engineers could get separate recognition after they had been included in a group whose economic interests were different if the majority of a clearly definable group wanted such recognition and made it known. [That opinion is not supported by the findings of the NLRB panel in the Sunflower Ordnance case, which was the first case in wh the A.S.C.E. took an active par Editor].

The importance of written contra was stressed by Mr. Davis. They duce sources of conflict between e ployers and employee and betw groups of employers such as engine and production workers. He said t latter field is one which the soci could well explore. Through such agreement it might be possible for en neers to define their own group maintain its independence of the s professional group.

Engineers as supervisors

Asked about engineers in supervis positions, Mr. Davis said that those were advanced to supervisory positi or who temporarily held such positi would automatically be excluded fr bargaining groups to which they mi belong, should bargaining questi arise. They need not, however, res from such groups. On the other ha supervisory employees cannot be c pelled to join any bargaining group having such a group claim the barg ing rights for them. That condition plies only to men in supervis positions.

Exclusion from bargaining

In reply to a question as to whet the members of any profession are cluded from provisions of the Wag Act, Mr. Davis said "No". The c people who are exempted are the su visors, and even they can organize collective bargaining if they wish, just noted.

Municipal and federal employees, said, have a limited status under the but they can and do organize and gain collectively. He noted, howe that such bargaining frequently is stricted by statutes fixing wages working conditions.

License a possible criterion

It is possible, Mr. Davis thinks, a state license to practice professi engineering might be used as the de mining factor in setting up a bargai group of professional men. In comm on this question he reiterated his ea statement that the NLRB has recogni professional workers as being o plane apart, but to get that recogni they must assert their desire for s rate consideration as a bargai group.

ENGINEERING NEWS-RECORD. Published every Thursday. **Return postage guaranteed.** Vol. 133, No. 21. Price 25c per copy. Allow at least ten days for c of address. All communications about subscriptions should be addressed to the Director of Circulation, 99-129 N. Broadway, Albany, 1, N. Y., or 330 W. 42nd S New York, 18, N. Y. Subscriptions, United States, U. S. Possessions and Latin American Republics, $5.00 for one year, $8.00 for two years, $10.00 for three Canada, $6.00 for one year, $10.00 for two years, $12.00 for three years. Great Britain and British Possessions 60 shillings for one year, 120 shillings for three All other countries, 50.00 for one year, $18.00 for three years. Entered as second-class matter October 29, 1936, at the Post Office at Albany, N. Y., under the March 3, 1879. Printed in the U.S.A. Cable Address: "McGrawhill New York." Member A.B.P. Member A.B.C. Copyright 1944 by McGraw-Hill Publishing Co Inc., James H. McGraw, Founder and Honorary Chairman; James H. McGraw, Jr., President; Howard Ehrlich, Executive Vice-President for Business Operations; Abbink, Executive Vice-President for Editorial Operations; Curtis W. McGraw, Treasurer; Joseph A. Gerardi, Secretary; J. E. Blackburn, Jr., Circulation Ma **Publication office: 99-129 North Broadway, Albany, 1, N. Y. Editorial and Executive Offices: 330 West 42nd St. New York, 18.** District Managers and Branch O Fred G. Hudson, 520 N. Michigan Ave., Chicago 11; 735-9 Oliver Building, Pittsburgh; J. W. Otterson, 68 Post St., San Francisco, 4; Aldwych House, Al London W. C. 2, England; Washington; J. M. Spackman, New York; A. B. Cozzens, Philadelphia; E. E. Duff, Jr., Cleveland; B. F. Horn, Detroit and Ch W. G. Payne, St. Louis; R. N. Phelan, Los Angeles; J. I. Ballard, Boston; Ralph Maultsby, Atlanta, Ga.

ublic works planning rged by Gen. Fleming

(Continued from page 1)

cious than we are. Not only is e the official White Paper of Lord lton, Minister of Reconstruction, ing forth the official Government cy, (*ENR* June 15, p. 890) but al- every private organization, from e of club women to trade associa- s, is busy producing plans.

Of course, England's problems are different from ours. Large scale damage must be made good. In London area alone a million homes been rendered uninhabitable. The ding of homes with government aid the heart of most of the planning e for the postwar period."

e emphasized that neither in Britain nor America will any plans be useful in the immediate transition period which are not complete with working drawings, cost estimates, specifications and contract documents ready for signing.

Other speakers at the conference included Joseph D. McGoldrick, controller of the City of New York, and Mrs. Samuel I. Rosenman, chairman of the National Committee on Housing, Inc. Mr. McGoldrick declared that if the larger cities encourage private enterprise to undertake building projects, the municipalities will thus aid their own financial status.

Mrs. Rosenman made a plea for the re-establishment of a national planning agency, pointing out that such a body was of great aid to the integration of state and local planning agencies.

U. S. equipment to reclaim Dutch lands

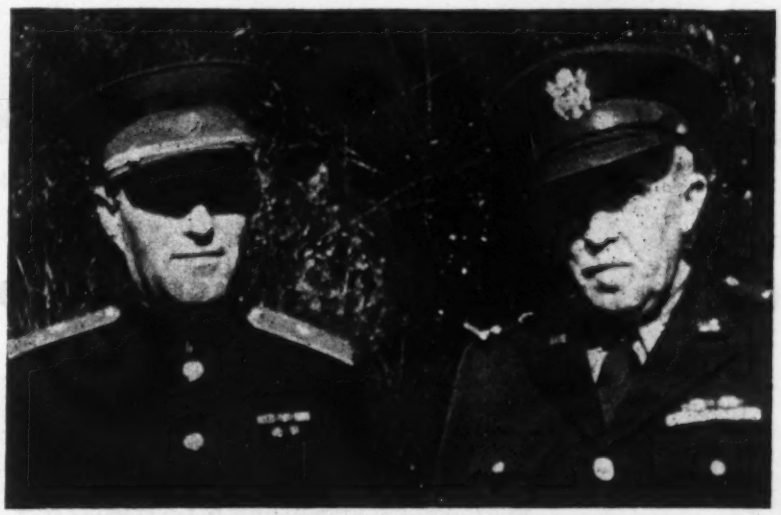
The Netherland government has placed orders amounting to $12,000,000 with U. S. firms for equipment and machinery needed to reclaim vast areas flooded by retreating German armies. Power plants, pipe, draglines, bulldozers, tractors and other equipment for repair of dikes and locks are included in the purchase orders.

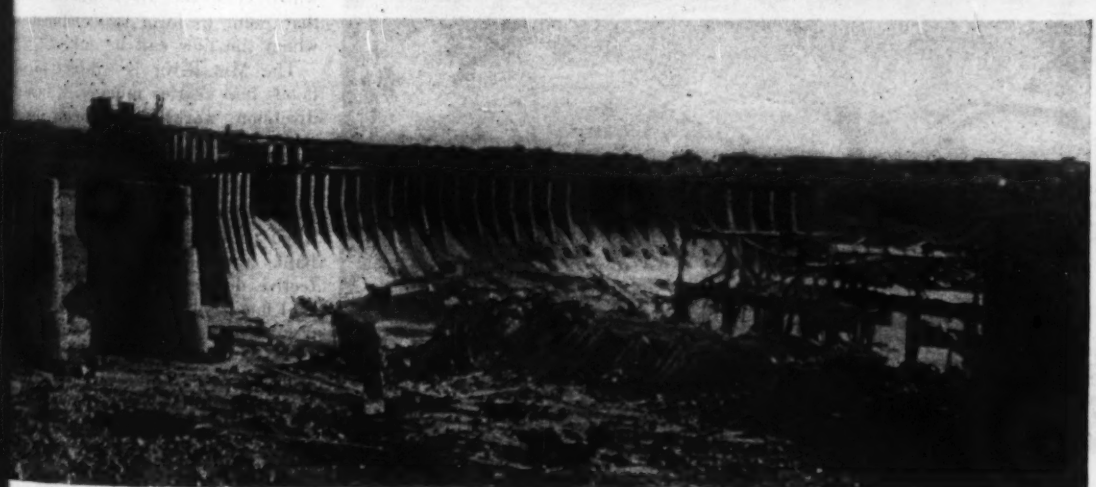
The Worthington Pump Co., Harrison, N. J., has been commissioned to manufacture 200 pumps with a combined capacity of 3,500,000 gpm. General Motors Corp. will supply diesel engines for driving power. The pumps are 20, 24, and 36-in. units, each capable of delivering 15,000 to 26,000 gpm. through pipes discharging over the dikes.

American General visits damaged Dnieper River Dam

ajor General Philip B. Fleming, head he Federal Works Administration, re- y visit to Russia on official business for Government and while there was given pportunity to see the damage done to reat Dnieper Dam and power plant by Germans, also the reconstruction work in progress. At the right is General ing and his host on the trip, Major ral Vashiliev of the Russian Army.

ow is reproduced one of the pictures by General Fleming. It shows the com- destruction of the intake structure more clearly than did the radiophoto r issue of Nov. 2, vol. p. 537. That ture extended from the standing end he main dam, at the left beyond the of the highway bridge, across the fore- d to the remaining piece of the intake ead at the extreme right. For scale he flat car and men clearing wreckage e center foreground. Beyond, at the is the wrecked frame of the power house, and in the distance can be seen the sluices cut through the dam by Soviet engineers to lower the reservoir and divert the flow during reconstruction.





Chinese News Service Photos from Paul Guillumette, Inc., New Y

Stone-filled baskets of loosely woven bamboo are used to protect the banks of the Min River at Kwanhsien in China.

Chinese Develop Unusual Stone Revetmen

In their work of controlling the flow of the Min River in China and making its waters available for irrigation, engineers of the Bureau for Improving Water Works in Szechwan province have developed an old Chinese method of bank protection into substan revetments and into temporary dams diversion purposes. Water for ir tion has been diverted from the r below Kwanhsien since 200 B. C. which time the river was divided that point to form two channels f which the flow can be taken.

Close-up of the long stone-filled baskets as they are laid in a bank revetment.

The Min River is subject to str floods and carries much silt, hence diversion works have been hard maintain and the banks have nee protection. In reconstruction work gun in 1935 the engineers develope scheme for using long bamboo bas filled with cobble stones to protect banks and their structures. These tective devices have gone through eral floods without serious damage.

For many years the Chinese used stone-filled baskets as a pro tive device in their river work. Kwangsien work, therefore, marks amplification of old methods, which the advantage of requiring the imp tion of no materials. Bamboo of

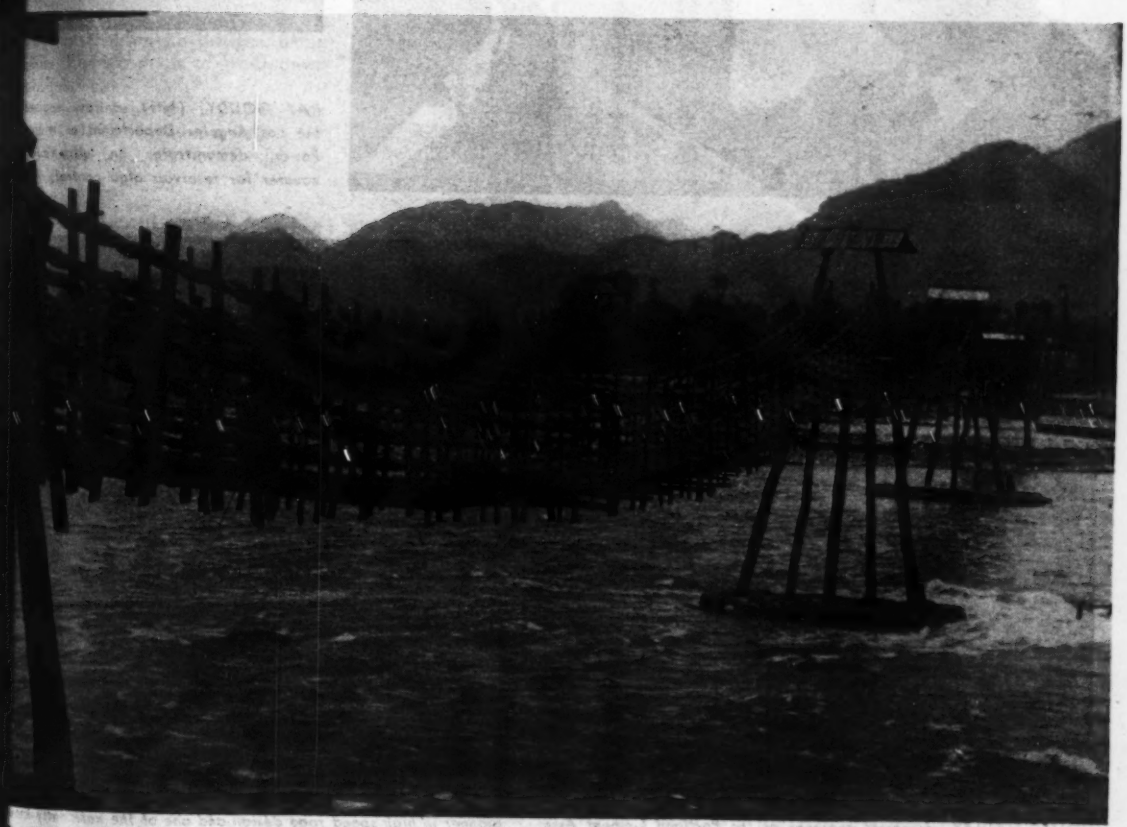
sile strength is cut in September in
hills near the city before the snows
e and is split into bands with which
weave the baskets. The usual length
a basket is 10 m. and the diameter
cm. Baskets are laid in place and
filled with boulders.

ilting of the channels is a major
blem. To overcome its effect, the
of the river is diverted alternately
one channel to the other while the
atered channel is cleared of silt
dredged where necessary.

o build the diversion dams, tripods
le of timbers 6 to 8 in. long are set
in a line in the river, the long baskets
bamboo are hung from them, and
are filled with stone and sunk.
these "sausages" have been
up to above water level, clay is
against the upstream side to make
dam tight.

he stone-filled baskets also are used
rotect the pile supports of bridges
the river. In some cases the
sages" are laid on the bottom first
the piles are driven through them;
others, the piles are set in holes
in the river bed and the stone-
baskets are laid against them for
d support and to prevent scour.

Lines of closely laid baskets used to protect the point where the river divides. Beyond the point is part of a diversion dam, built of stone-filled baskets slung under timber tripods, that was used to close off the channel at the right.



upports for this 552-meter suspension bridge over the Min River are protected from scour by a cobble fill held in ce by stone-filled baskets. The suspension cables are made of twisted strands of split bamboo.

MEN AT WORK

Logging and timber practices in the South Pacific was the topic under discussion during this recent get-together of: N. A. BOWERS, Pacific Coast editor of News-Record; CHESTER J. HOGUE, director of the technical service department, West Coast Lumbermen's Assn.; and J. KENNETH PEARCE, professor of logging engineering at the University of Washington.

RALPH LOWRY, construction engineer the Bureau of Reclamation in charge Shasta Dam, who took a "busman's holid on one Sunday recently to provide a p sonal inspection tour for two News-Rec editors.

RAY GOUDY, (left) sanitary engineer the Los Angeles Department of Water Power, demonstrates an ultra-violet counter for reservoir alga control.

HOMER HADLEY, structural engineer of the Portland Cement Assn., Seattle, Wash., who has originated many novel designs in concrete and promoted widespread use of box girders in highway bridge design. A pioneer in high speed road design and one of the nationally known gineers of the West is R. H. BALDOCK, Oregon's state highway neer, seated at his desk in Salem, highway department head

Construction Communiques

ENGINEERING NEWS FROM THE BATTLEFRONTS

Japanese-American Engineers — A ...pany of volunteer Japanese-Ameri... engineers has been working and ...ting with front-line infantrymen in ... Fifth Army's drive over the moun... of northern Italy. They built ...ds, constructed by-passes and picked ... hundreds of enemy mines, all in ...ge of German shell fire.

Part of a special regimental combat ... trained at Camp Shelby, Miss., ... year, all members of the company ... Americans of Japanese descent who ...nteered for combat duty from ...waii and relocation centers in the ...ted States. When they joined the ...h Army they were assigned the main ...d of advance in their sector—one of ... toughest jobs on the front.

"From the first day we knew we had ...mart, rugged gang," said 1st Lieut. ...k Hanten of White Lake, S. D., ...neer officer. "They're eager to learn ... they cooperate perfectly. They're ...od GI Engineer outfit."

...ne of their most important jobs is ...structing emergency run-arounds, ...ough stream beds where retreating ...rmans have blown up bridges, using ...ldozers and air drills to grade down ... embankments.

The company is led by Capt. Pershing ...kada of Mitchell, Neb., an engineer- ... graduate of the University of ...braska.

Maps for Fighting Troops—When ... first American patrols reached the ...fried Line, our troops had detailed ... and intelligence information con...ing every type of structure, forti...ion and strong point. For more than ...ar the Intelligence Division, Office ...he Chief Engineer, ETO, had been ...king on the preparation of these ... and gathering information on ...ything Hitler threw in to protect the ...man border. As Allied troops fought ... way through France, additional ...rmation was garnered from French ...ces as well as from captured enemy ...uments. Finally, when the time for ...assault came, the Intelligence Divi... had printed thousands of maps ... distributed them to the attacking ...

...pplying our troops with maps is a ...ulanean task which has grown more ...plex with the rapid advance of ...erican forces. Working at the start ... aerial photography provided by ...R.A.F.—later augmented by photo...phs obtained by the U. S. Army Air ...ces—both British and American topographic units started in 1942 to produce maps covering the 20,000 sq. mi. of especially critical areas. As aerial photography became available, the project was expanded to cover 50,000 sq. mi., or approximately 700 sheets of large scale map.

Engineer Citations—According to a newspaper dispatch, men of the 146th Engineer Combat Battalion who cleared beach obstacles on the Normandy coast on D-day, have been awarded a unit citation for outstanding performance of duty.

Operating as part of a special engineer task force, they disembarked in landing craft at 6:33 a. m. June 6. "One ton of explosives and accessories," the citation said had to be carried off by hand. Due to the rising tide it was necessary to execute the demolition from the sea.

"After landing, the men worked under intermittent artillery and machine gun fire. Four times it was necessary for the teams to interrupt their work and attack enemy sniper positions.

The assault was led by Lt. Col. Carl J. Isley of Watkins Glen, N. Y., who was awarded a Distinguished Service Cross. Capt. Sam H. Ball, Jr., was presented with the British D.S.O., and other personnel received 13 Silver Stars and nine Bronze Stars.

Col. David W. Heiman of Raleigh, N. C., with the Army Corps of Engineers in the Pacific, has been awarded the Silver Star by the War Department for work in readying an air strip on Blake Island while under enemy fire.

The citation for the Silver Star award reads: "On Blake Island, June 9-10, 1944, as commanding officer of a combat engineer group, he organized and led reconnaissances near a vital airdrome despite the fact that the enemy was still active in the area. His courageous actions under enemy fire were instrumental in making the strip ready for use of fighter planes within two days. By his gallant conduct he greatly expedited the operation."

Official U. S. Marine Corps Photo.

Seabees build a road on captured Pacific isle

Seabees, using International diesel bulldozers, build a road to the site where a dock will be built on Emirau Island in the Pacific to facilitate the unloading of LST's.

Western state engineers discuss plans for postwar regional developments

Association of Western State Engineers meets in Denver. Settlement of water questions by interstate compact favored

Post-war plans for development of water resources in eleven western states were outlined at the 17th annual convention of the Association of Western State Engineers, held in Denver, Colo., Nov. 13 and 14.

The plans, many of which are highly tentative, depend largely on federal initiative and expenditure, although many states plan on making substantial financial contributions. Oklahoma, for instance, is planning to use Oklahoma capital, Oklahoma labor, and Oklahoma materials as far as possible in an extensive program of industrial development, irrigation, flood control, new highways, rural electrification, public buildings and parks. Federal agencies are cooperating. Ninety-four percent of the state is now organized or being organized into soil conservation districts among the farmers.

Utah needs water

Utah's State Engineer, E. H. Watson, described Utah's unique predicament. The eastern part of the state, draining into the Colorado River, is a region of water in deep canyons with no nearby irrigable lands. The western part, around Great Salt Lake, has the highly developed agricultural region but not nearly enough water for the irrigable land available.

Mr. Watson said that engineers view with envy and consternation the flow of fresh water into Great Salt Lake only to be steamed off in evaporation. It has even been proposed to run a ditch around the shore to cut off all fresh water inflow, pumping the water to points where it could be used for irrigation, and letting Great Sale Lake dry up and blow away if need be.

Colorado has 25 projects in various stages of promotion and development. Most of them are in the preliminary stage, but the Colorado-Big Thompson project in the north-central part and the John Martin Dam on the Arkansas were cited as progressing toward completion.

Missouri River development

Several states in the Missouri River Basin expressed satisfaction over the reapproachment between the Army Engineers and the Bureau of Reclamation on plans for the development of the basin. North Dakota expects to benefit by diversions to the eastern part of the state. The Bureau of Reclamation has reinstated the old Buford-Trenton pumping project and other projects in the western part, one of which has been in the promotional stage since 1904, or 40 years. North Dakota has also developed a state irrigation project of its own near Williston. Diversion by pumping out of the Missouri River is proposed.

Oppose Missouri River Authority

Opposition to what was termed encroachment on state autonomy was voiced by George S. Knapp, chief engineer of water resources of Kansas, as he outlined the work of the engineering sub-committee of the Missouri River States Committee. The creation of an MRA would submerge state identities and reduce state initiative, which has been one of the active forces in national development. The same results, Mr. Knapp said, can be obtained by state compacts and state cooperation with existing federal agencies which are available and entirely competent.

[Like opposition to establishment of a Missouri Valley Authority was recorded by the National Reclamation Association at a meeting held immediately following this meeting of state engineers.—Editor.]

Interstate Compacts Favored

Settlement of interstate differences by compact rather than by litigation was high-lighted by Governor Hunt of Wyoming in his keynote speech for the convention. Citing Wyoming's experience, he said the Wyoming-Nebraska suit over North Platte water cost $800,000 and had made necessary 24 sessions since 1936. It is now settled, he hopes, and each side claims victory.

The Wyoming-Colorado dispute over the Laramie River has been in court for 29 of the 33 years since it began in 1911. On the other hand, Wyoming and South Dakota formed a compact relative to the interstate Belle Fourche River in orderly procedure, without friction, and on the basis of assembled facts at a cost to Wyoming of $250.

Summing up his points in favor of compacts, Governor Hunt said they were much more workable than court decrees and they cost very much less. They aroused no friction and antagonism because it was not a contest, one was supposed to win, and fi it placed the problem in the sk hands of technicians who appraised phases of the problem without pr dice.

General approval of Governor H paper was expressed by the assem

The advantages of interstate c pacts were discussed by J. C. Ste consulting engineer of Portland, at meeting of the Colorado Section of American Society of Civil Engin Monday evening, at which the s engineers were guests. Mr. Ste was introduced to the audience by chairman with the phrase reminis of the recent political campai "I now give you your next preside Mr. Stevens said that his experi with the Rio Grande compact indic that when all the facts were assem and made available to all intere parties, opposition and criticism appeared.

Many subjects covered

Highlights of the Tuesday's sess of the state engineers meeting wer follows:

The U. S. Geological Service exp to extend its ground-water investiga program, according to Glen Par chief hydraulic engineer of the ser as an aid in solving western w problems.

The Bureau of Reclamation is in sition to take up reconversion slac employment in its far-flung proj throughout all of the western states. fact, like many other agencies, i waiting for personnel, according Commissioner Bashore of the Bureau Reclamation.

Brig. Gen. R. C. Crawford, divi engineer, Missouri River Division, U Engineer Department, described method of appraising flood damage the basis of physical damages re ing from the design flood. High po of the O'Mahoney amendment to Rivers and Harbors Bill were touc upon by Judge Clifford Stone Denver.

The Columbia Basin project of Bureau of Reclamation was descri by Charles J. Bartholet, superv division of water resources, state Washington.

The convention closed with a b quet presided over by the "Grand Man of Utah", William R. Wall Guest speaker was Royce J. Tip consulting engineer, Denver, who sp on the history of irrigation.

Fifteen of the seventeen wes states were represented at the mee Fred E. Buck, state engineer of M tana, was elected president of the sociation for the ensuing year.

WASHINGTON HIGHLIGHTS

Among the many legislative fights in progress in Washington is that concerning the St. Lawrence project. Senator George D. Aiken of Vermont is attempting to add the project to the Rivers and Harbors Bill now before the Senate in order to get a vote on the project. His move is in direct conflict with the action of a subcommittee of the Senate Commerce Committee having jurisdiction over the St. Lawrence project and which had successfully halted Senator Aiken's early attempts to get action.

The subcommittee this week began hearings on whether the Senator's proposed amendment should be handled as legislation requiring a simple majority in both houses or whether it should be handled as a treaty requiring a two-thirds vote in the Senate for approval. If the committee determines that the project requires a treaty, the amendment could be referred to the Foreign Relations Committee and pigeon-holded for months under pressure of more important work.

Senate Majority Leader Barkley reports the Aiken amendment would be in order on either the flood-control or the rivers and harbors bill. Thus, if the Vermont senator succeeds in getting the project added to either bill he will bypass the subcommittee hearings. However, it is by no means certain that the Senate will adopt the Aiken amendment. Moreover, if it does, the House, which left the St. Lawrence project out of the Rivers and Harbors Bill as too controversial a subject, may not accept the amendment.

Another Congressional fight relates to new highway facilities across the Potomac River to supplant the 14th Street Bridge, which spans the river about a mile downstream from the Lincoln Memorial Bridge. Secretary of Interior Ickes and engineers of the National Capital Park and Planning Commission, which comes under his supervision, favor a six-lane crossing. Opponents of this proposal seek twin structures carrying one-way traffic. Measures have been introduced in Congress asking for approval for both proposals.

That the Roosevelt Administration will seek Senate approval of a Missouri Valley Authority during this session of Congress was seen possible last week when David E. Lilienthal, chairman of the Tennessee Valley Authority, called at the White House to discuss the proposal with President Roosevelt, who has already endorsed the plan. (*ENR* Sept. 28. vol. p. 379).

The conference gave rise to reports that supporters of such an authority might seek to add the proposal as an amendment to the Flood-Control Bill, which the Senate may consider this week. After his conference with the President, Mr. Lilienthal said the chief executive had also expressed a strong hope that the Cumberland River, which empties into the Ohio River a few miles upstream from the Tennessee could be included in the TVA setup.

Officials of the War Production Board hold no hope for improvement in the supply of large-size tires in the first quarter of 1945 nor in the second quarter if Germany has not been beaten by that time. Although the output of tires has been increased sharply in recent months, output has not kept pace with the demand of the army, and fewer tires will be available in the immediate future than there were in the immediate past. By the end of next year the authorities predict that tires will roll off the production lines in quantities to supply both army and civilian demand, but the shortage will continue at the retail level for a long time. Production scheduled for the fourth quarter for sizes 8.25 and larger will be only enough to supply about half of the essential civilian requirements, leaving a deficit for the period of almost 100,000 tires.

BRIEF NEWS

About 45 percent of all electric energy consumed in Oregon, Washington, Idaho, Montana and Utah during the 12-month period ended June 30, 1944, was supplied by the federal power plants at Bonneville and Grand Coulee dams, according to figures released by the Bonneville Power Administration. During the fiscal year 1944, Bonneville sold more than 8½ billion kwh. of electric energy at a total cost to its customers of $20,893,363, or an average of 2.39 mills per kwh.

Premier John Hart has given assurance that British Columbia will cooperate in settling any difficulties which may arise from the flooding of 5,000 acres of Canadian land, when the third step of Seattle's Ross Dam project is completed.

Upwards of 30,000,000 b.ft. of timber will be logged before Ruby basin, above Ross Dam, is flooded. The project is part of Seattle's program to increase its electric power. The Skagit power project is producing 75,000 hp. at George Dam, and 160,000 hp. at Diablo Dam. Ross Dam will deliver a minimum of 480,000 hp. it is reported.

An Ohio River floodwall project, begun in 1939, has been turned over by Army Engineers to the Lawrenceburg flood control district for operation. Built at a cost of $2,300,000, the wall is 19,475 ft. long and is designed to protect the city against a flood three feet higher than the 78.6-ft. crest reached in 1937.

WPB approval has been asked by the San Diego area production urgency committee for the widening of a nine-mile stretch of U. S. Highway 101 north of San Diego, Calif., from three to four lanes, it was announced recently by John Young, committee chairman. Urged by the Public Roads Administration to meet wartime traffic requirements, the construction is expected to cost $1,206,000.

Officials of Grayson County, Tex., have asked the Texas Highway Commission to help them obtain $2,218,768 from the federal government to construct two additional bridges on roads now covered by Denison Dam waters. One is a new $1,170,000 project planned to make direct access to Sherman and Denison possible for about 6,000 people now cut off from the regular road.

The other bridge, to be built on the Denison-Sherman-Madill, Okla., highway has already received a federal allocation of $1,212,000. A WPB steel priority could not be obtained for the bridge and now the dam waters have covered the bridge site, making building more expensive. An additional $1,048,768 is being sought from the federal government to make construction of the project possible.

The Allegheny County public improvements committee in Pittsburgh, Pa. plans to send out representatives to urge and aid the administrations of municipalities in the county to develop their postwar programs. The committee has learned that of the county's 125 municipalities, only 56 actually are at work on projects and that less than $6,000,000 worth of postwar construction projects in the county actually are on paper ready for contracts.

The slum clearance committee of the Texas League of Municipalities is preparing legislation which would authorize cities to condemn and sell slum areas to private business for modern housing or other worthwhile development.

News of the Engineering Schools

At a recent meeting in Chicago of the division of administrative officers of engineering colleges of the Society for the Promotion of Engineering Education, Dean S. S. Steinberg of the College of Engineering at the University of Maryland was appointed special representative of the society in Washington, D. C. His duty will be to look after the interests there of all engineering colleges of the country, it has been announced by H. S. Rogers, president of the society and of the Polytechnic Institute of Brooklyn, N. Y.

Prof. Jess H. Davis, for fifteen years professor of experimental engineering at Clarkson College of Technology, Potsdam, N. Y., has been named head of the mechanical engineering department of the Speed Scientific School, University of Louisville, Ky. He was graduated from Ohio State University in 1927 and received his master of science degree from Ohio State in 1932.

When Lt. Col. J. T. L. McNew, now on military leave from his position as head of the department of civil engineering, comes back to the Agricultural and Mechanical College of Texas, he will step into the newly created position of vice-president of engineering. He is now in the China-India-Burma theater of operations.

Following the election of Gibb Gilchrist to the presidency of the college, the board of directors approved his program which included creation of the posts of vice president for engineering and agriculture, and his selection of Col. McNew as his assistant in the engineering branch.

Acting Dean Howard W. Barlow has been named dean of the engineering school.

A manual for engineering instructors has been prepared by a committee of the engineering faculty at Virginia Polytechnic Institute. Practical instructions for teachers of engineering subjects are given in an illustrated booklet, "Effective Teaching." A rating sheet by which students may grade their instructors is included.

According to a survey made in the larger cities of Illinois and Indiana, three out of every four high school seniors expect to go to college.

The effect of this highly mechanized war and the age of specialized training is revealed in the fact that 43.3 percent of those planning to attend college will study engineering, the other choices, in order, being medicine, law, business administration, agriculture and physical education.

Student enrollment at the Stevens Institute of Technology, Hoboken, N. J., is now taking place at the same rate as in the prewar period. In peacetime barely half of the freshmen were under 18 years of age; in the current class practically all are under that age.

Nearly 75 percent of the 63 new students can expect to have at least a full freshman year of engineering college before they reach draft age.

Referring to the recent announcement of Cornell University that, after the war, five years instead of four will be required for a bachelor of arts degree in all branches of engineering at Cornell, the Baltimore "Sun" says editorially:

"Men of the cultural arts who look back upon their undergraduate days recall with sympathy the engineering student struggling with his higher mathematics, his physics and chemistry, his stresses and his strains, and with little time for social relaxation or for indulgence in the more humane subjects. They have seen the danger of his turning out to be a mere technician and nothing more. Cornell's proposal would to some extent rectify that.

"It remains to be seen whether other schools will follow Cornell's lead, or whether the traditional four undergraduate years for the average engineering student and three years of graduate work for the exceptional student will generally prevail."

The University of Minnesota, College of Engineering, has just accepted a gift of $5,000 from Johnson, Drake & Piper, Inc. and S. J. Groves & Sons, of Minneapolis, through their Latin-American subsidiary, Compania Constructora Groves-Drake, Inc. The gift is being used to establish three fellowships in engineering courses at the University of Minnesota available to Venezuelan graduate students. The offer of these fellowships was accepted for the Venezuelan Government by Carlos Pena Uslar, president of the Instituto Nacional de Obras Sanitarias—a semi-public but autonomous subdivision of the government charged with the construction and operation of all the sewer and water systems of Venezuela.

The Ohio State Department of Education has authorized the Youngstown School of Engineering to grant bachelor of engineering degrees, Dr. Howard W. Jones, president of the college, announced. He said the college has $100,000 set aside to rehabilitate an engineering plant and buy new equipment. Gifts amounting to $15,000 have been made to the engineering school recently by industries and individuals. The school has 99 students. In the past it has given courses in conjunction with the Case School of Applied Science, Cleveland.

Prof. Roy A. Spencer has been named dean of the college of engineering, University of Saskatchewan, Regina, replacing D. C. J. MacKenzie, recently made president of the National Research Council of Canada. Dean Spencer, a native of Nova Scotia, is an engineering graduate of McGill University, Montreal.

• • •

British Columbia plans costly postwar highway

A nine-project program of postwar construction calling for the building of 6,000 miles of highways at an estimated cost of $210,000,000 has been prepared by the Public Works Department of the Province of British Columbia, Canada, and has been submitted to the dominion government for approval as part of its plan to provide Canadian postwar employment on a large scale.

The nine projects and their estimated costs are as follows: Trans-Canada Highway, $44,167,000; Southern Trans-Provincial, $53,508,000; Island Highway, $18,623,300; Northern Trans-Provincial, $24,661,100; British Columbia-Yukon-Alaska, $23,709,300; Cariboo, $15,458,000; North Thompson, $7,034,300; Vancouver-New Westminster express highway, $11,237,000; parks highways, $11,858,900.

The breakdown of costs is: Land purchase, $3,260,000; labor, $113,800,200; materials, $83,270,000; and administration, $9,845,500. The average cost of the highways would be $35,000 per mile. This is high because of the difficult terrain in many parts of the province and the necessity for an east-west development over a north-south mountain system.

Survey parties have been in the field during the last two summers locating the major projects, especially for the connections between the Alaska Highway and the road systems of the southern part of the province.

Most of the states able to match federal aid for postwar highways

A.A.S.H.O. survey shows that 44 states can provide their share of road funds without resort to new taxation

special survey by the American ciation of State Highway Officials oses that federal-aid authorizations ided in the postwar highway bill before the House of Representa- (H. R. 4915) can be matched by ast 44 of the 48 states within the allowed through normal financing ods, and without increases in pres- highway tax rates. Two states, o and Tennessee, have not yet re- ded to the association's question- . This finding definitely contra- the widespread report to the ef- that 30 states would be unable to ce the contemplated highway pro- .

e association directed its inquiry e highway departments of the 30 s reported to be unable to match federal funds. Of the 28 which far have replied, only Colorado rts it is considering an increase in because of its inability to take up ull apportionment of federal funds n the time permitted.

Funds available for five years

e earlier speculation concerning 30 states was based on estimated r vehicle revenues in 1945, 1946 1947, and apparently found its n in an assumption that all the would take up the federal funds g those three calendar years. ally, only nine of the 28 reporting plan to do this, with four states ding the program over four years ix over five years, as can be done r H. R. 4915. The remaining states ot indicate their financial program- by years.

obtain federal aid for postwar way construction under the pend- egislation, a state must enter into greement with the Commissioner ublic Roads for its share of the 000,000 to be made available in of the three fiscal years following termination of the present war gency. However, the bill provides the funds shall be available for nditure for two years after the act has been signed, thus giving tates five years over which the nditures can be spent.

Some special financing

other misconception dispelled by urvey is that all states which are e to finance their share of the pro- gram entirely from current revenues assigned by statute to state highway use would be compelled to seek additional taxes. Such is not the case. Funds for matching federal aid can be obtained from cities and towns.

The survey shows that 34 states, including the 18 whose ability to match the federal funds is not questioned, do plan to meet their share of the program entirely from current revenues available to the state for that purpose. But in four others, bond issues will be used, and already have been authorized, while nine states report that contribution of funds from local units of government will be available for matching purposes. Both are long-established methods for financing capital improvements of major highways.

Seven states, namely, Delaware, Louisiana, Maine, Mississippi, Oklahoma, Montana, and Nebraska, are undecided as to how they would finance the program if it got under way next year, which was assumed for purposes of making the survey. In these states the formulation of a financing program awaits final enactment of the federal-aid law by Congress, and after that a consideration of the problem by their legislatures. However, none of these states foresees insurmountable difficulties, and none reports plans for obtaining additional funds through increasing tax rates.

Bond issues approved

The survey reveals numerous significant sidelights on the position of the states generally to finance the contemplated program. Bond issues have been authorized, for example, in New Mexico, South Carolina, West Virginia and North Dakota, yet the total highway indebtedness of the first three states will continue to decline. North Dakota's position in this regard not reported.

In Alabama, the highway department reports it will be able to match funds provided under H. R. 4915 from current revenues, but has the authority to borrow $2.5 million more, if needed.

Illinois can obligate its entire apportionment in three years from existing balances and current revenues, with $100,000,000 more in the state general fund from which the General Assembly could draw for matching purposes if necessary.

Eight Indiana towns warned on pollution

Eight Indiana towns, and two industrial concerns are studying a mandate from the State Stream Pollution Control Board, issued Oct. 18, to stop dumping waste materials into state streams by Oct. 1, 1945. The cities are Plymouth, Fowler, Decatur, Portland, Warsaw, Columbia City, Fort Branch, and Terre Haute.

The city of Decatur received a PWA grant for a disposal plant in 1935, but the city council then termed the cost excessive. City officials now believe that construction of a sewage disposal plant will be necessary to comply with the order.

. . .

John L. Savage awarded the John Fritz Medal

John L. Savage, chief designing engineer of the Bureau of Reclamation, has been awarded the John Fritz Medal. This medal, for notable scientific or industrial achievement, is one of the oldest and generally regarded as the highest award in engineering in the United States as the award embraces the four major branches of the profession. Selection for the award is made jointly by past presidents of civil, mining and metallurgical, mechanical and electrical engineering societies.

Mr. Savage, in 28 years service with the federal government, has designed and supervised construction of more than 60 major dams, including the largest masonry structures in the world —Boulder, Grand Coulee and Shasta. Outside the Bureau of Reclamation he supervised design of Madden Dam in the Canal Zone and Norris and Wheeler dams of the Tennessee Valley Authority.

Internationally known, Mr. Savage has been called in as consultant on structures all over the world. For the past several months he has been in India and China on design of some of the largest irrigation developments the world has even known. One of these, in the Punjab in India, is a 2,000,000-acre reclamation scheme with a 200-mile canal and a $20,000,000 dam.

Award of the medal will be made to Mr. Savage at the annual meeting of the American Society of Civil Engineers in January.

Calcutta-North Burma pipeline in operation

Military censorship having been lifted by Lieut. Gen. Daniel I. Sultan, commander of the India-Burma theatre, it is now permitted to say that a pipeline from Calcutta up the Brahmaputra Valley through Assam into North Burma, a distance of almost 2000 miles, is in operation and delivering oil and gasoline for motor vehicles and airplanes at American installations in the North Burma-Assam combat area.

The first detailed information about the project came in a wireless dispatch from Tillman Durdin to the New York "Times" on Nov. 19. Mr. Durdin said, in part:

"The pipeline is a completely American job and ranks with the Ledo Road as one of the major projects designed to get supplies to augment communications into China. It is believed to be already the greatest pipeline construction feat in history and will be a still more impressive achievement when laid all the way into central Yunnan. When completed the line will be the longest in the world.

"For many months the pipeline has been a major factor in supplying the North Burma campaign. American installations such as airfields and trucking centers all the way from Calcutta to Burma are being supplied by the line. Superfortress bases in India are among the establishments fed by it. Trucks, bulldozers and shovels for Ledo Road work got their fuel from the line.

"Part of the line is six-inch, part four-inch. Under ideal operating conditions nearly 30,000 tons a month can be pumped through a six-inch invasion pipe and about 14,000 tons a month through a four-inch invasion pipe.

"Thus even the four-inch part of the Calcutta-Burma line could now be delivering more liquid fuel than the highest total tonnage of purely military supplies ever carried over the old Burma Road."

The line is being built by the Services of Supply construction service, headed by Brig. Gen. Thomas F. Farrell, former chief engineer of New York State. Maj. Gen. W. E. R. Covell is commanding general, S.O.S.

• • •

Big bond issues passed by Houston, Tex.

All city, county and school bond issues submitted to the voters of Houston, Tex., on Nov. 7 were passed by a majority of two to one. These include $17,000,000 county, $26,250,000 city, and $7,500,000 school bonds.

The county bond issue includes $9,000,000 for county drainage and flood control; $2,000,000 for a new court house; and $6,000,000 for roads and tunnels. The city bond issue includes waste disposal, $100,000; library, $150,000; street opening and widening, $150,000; Coliseum Annex expansion, $250,000; airport, $325,000; flood control, $600,000; police administration, $750,000; public health centers and facilities, $550,000; bituminous surfacing, $900,000; civic center and exposition grounds, $1,300,000; parks and recreation, $1,800,000; permanent paving, $5,000,000; sanitary sewers, $7,100,000; and storm sewers, $7,275,000.

On Dec. 19 citizens will vote on a $5,000,000 navigation district bond issue to finance the building of two ship channel tunnels and for buying and improving the city docks.

• • •

Cheves to China; Neyland replaces him in India

Division of the China-India-Burma command into an India-Burma theater and a China theater, following Gen. Stillwell's recall to Washington, resulted in several engineering personnel shifts, as for example the elevation of Lt. Gen. Daniel I. Sultan, well-known Engineer officer, to command of the India-Burma forces (*ENR*, Nov. 16, 1944, vol. p. 607). This week it is ther announced that Maj. Gen. C X. Cheves, who has commanded base section and port of Calcutta, been appointed commanding ge of the Services of Supply for the Forces in the China Theater, and Col. R. R. Neyland, Jr., who has in charge of the advance supply se in China, will succeed General C in India.

General Cheves, a Cavalry r than an Engineer officer, has, how had important engineer and su assignments since the beginning o war. At the time of the African paign he was chief of staff to Maj. Robert W. Crawford, chief, S U. S. Army Forces in the Middle succeeding to the top job there General Crawford went to Engla be deputy S.O.S. commander for European invasion. In Calcutta, cipal port for China's supplies, Ge Cheves had charge of much wateri construction, and it is at this that the great oil products pipe just announced as in operation a India and Burma, originates.

Col. Neyland, an Engineer grad of West Point, was famous for si years as football coach at the Un sity of Tennessee, coming back int Army after Pearl Harbor to be di engineer at Norfolk, Va., and late Dallas, Tex.

JOBS OF THE WEEK

CARBON PLANT, Monument, N. M.

Charles Eneu Johnson Co., Monument, N. M., awarded a contract for the d and construction of a carbon black plant to United Engineers & Constru Inc., Philadelphia, Pa. The estimated cost is $1,000,000. Defense Plant C will finance.

CARBON BLACK PLANT, Eunice, N. M.

United Engineers and Constructors, Inc., Philadelphia, Pa., will design construct a carbon black plant for the Panhandle Carbon Co., New York, N The estimated cost is $1,000,000. Defense Plant Corp. will finance.

GRADING, PAVING AREAS, San Diego, Calif.

J. A. Casson and N. M. Ball, Hayward, Calif., will grade and pave parking at 11th Naval Base, at a cost of $1,263,077. Bureau of Yards & Docks, Department, Washington, D. C. awarded the contract.

AIRPORT, Parkersburg, W. Va.

Commissioners of Wood County awarded a contract to Ralph Meyers struction Co., Salem, Ind., and Western Contracting Co., Sioux City, Ia., excavating at Parkersburg-Wood County Airport, at $1,655,000; Concrete was awarded to Williams Construction Co., Baltimore, at $580,000.

PLANT EXPANSION, Gardena, Calif.

Rubber Reserve Co., Gardena, Calif., awarded a contract for styrene p expansion to Stone & Webster Engineering Co., at $1,796,000.

STORAGE BUILDINGS, Linden, N. J.

U. S. Engineers, New York, N. Y., awarded a contract for the construc storage facilities to Del Balso Construction Co., New York, N. Y., at $1,08

Note—Additional bidding and contract news on many projects large and small appear in the Con News section beginning on page 14.

OBITUARY

Frederick A. Smith, 88, a civil engi- for Chicago, Ill., for 25 years, died . 13. In 1902, while on leave from city service, he assisted in putting operation an irrigation system sur- nding Pearl Harbor, Hawaii.

John R. Rostron, 77, bridge engineer h the city of London, Ont., for 28 rs, died Nov. 13. He was responsible most of the modern highway bridges that area.

George L. Swan, 75, Rochester, N. Y., was president of the contracting n of Gorsline & Swan before his re- ment four years ago, died Nov. 14. was a former president of the New rk State Builders Association.

Harry W. Miller, 59, superintendent construction for the state of Illinois, d Nov. 13. He had recently been in rge of construction at the three state titutions in Jacksonville, Ill.

Philip L. Greene, 64, architect, since 9 associated with the District U. S. gineers Office, War Department, died v. 13 in Washington, D. C. He was merly an associate member of the n of York and Sawyer, New York.

Charles N. Smith, Sr., 68, engineer the Atlantic Coast Line R. R. for y years, died Nov. 2 in Norfolk, Va.

Charles A. Wright, 84, Philadelphia, bridge builder, died Nov. 12. Mr. ight in 1926 formed the Tacony- myra Bridge Co., which built the 00,000 span of the same name over Delaware River between northeast iladelphia and Palmyra, N. J. He ved as president of the bridge com- y for several years.

• • •

New city hall voted for Birmingham, Ala.

On Nov. 7 the citizens of Birming- n, Ala., by a large majority, ap- ved the proposition of the city com- sion to purchase a block bounded by ntieth and Nineteenth Streets, No., Seventh and Eighth Avenues, for erection of a new city hall, when terial and labor are available. This provide another unit for the pro- d civic center around Woodrow son Park where the county court se, public library and city audi- um are already located.

Army Engineers invite queries on materials

Construction and materials firms interested in purchase of stocks and equipment on hand where the Army Engineers are closing out contracts may be put on a circulation list to receive an inventory of materials currently available. In the New York area written request should be made to the U. S. Army Corps of Engineers, Contract Termination Branch, 120 Wall St., New York, N. Y. Requests must be specific as to items of interest since the circulation list is so catalogued that buyers indicating an interest in the particular items will be advised and can make an inspection at their convenience. They may also bid informally to purchase any or all of an inventory after such an inspection.

Materials thus offered are contractor-owned inventories, now largely of construction warehouse stocks. For a limited time after receipt of job inventories from the contractors and before title actually is transferred so the property becomes government (rather than job) owned or government surplus property, such inventories can be offered for sale. It is incumbent on the bidder to show that he has authorization under current government regulations to make purchases on items requested.

WEEKLY CONSTRUCTION SUMMARY

CONTRACTS

Continental U. S. Only (Thousands of Dollars)

	Week Ending Nov. 25 1943	Nov 16 1944	Nov. 23 1944
Federal	$33,637	$13,889	$15,800
State & Municipal	1,592	5,861	1,112
Total public	$35,229	$19,750	$16,912
Total private	1,294	9,650	6,277
TOTAL	$36,523	$29,400	$23,189
Cumulative 1944	(47 weeks)		$1,600,543
1943	(47 weeks)		$2,885,384

Note: Minimum size projects included are: Waterworks and waterways projects, $15,000; other public works, $25,000; industrial buildings, $40,000; other buildings, $150,000.

NEW PRODUCTIVE CAPITAL

	Cumulative 1943 47 Weeks	1944 47 Weeks
NON-FEDERAL	$311,266	$419,247
Corp. Securities	22,228	106,720
State & Mun.	123,360	167,587
RFC Loans	14,545	61,940
FPHA Loans	3,133	.....
REA Loans	20,000	20,000
Fed-Aid Hwy	128,000	63,000
FEDERAL	$2,753,838	$1,263,800
TOTAL CAPITAL	$3,065,104	$1,683,047

ENR INDEX NUMBERS

Index base=100		1913	1926
Construction Cost	Nov. '44	301.09	144.73
Building Cost	Nov. '44	236.10	127.63
Volume	Oct. '44	91	40

MEETINGS

National

THE PRODUCERS' COUNCIL, INC., 21st semi-annual meeting, Hotel Roosevelt, New York, N. Y., Nov. 27-29.

AMERICAN ASSOCIATION OF STATE HIGHWAY OFFICIALS, annual meeting, Netherland Plaza Hotel, Cincinnati, Ohio, Nov. 27-30.

ASSOCIATED GENERAL CONTRACTORS OF AMERICA, governing and advisory boards, Drake Hotel, Chicago, Ill., Nov. 28-29.

AMERICAN SOCIETY FOR TESTING MATERIALS and American Institute of Mining and Metallurgical Engineers, Symposium on Stress-Corrosion Cracking, Benjamin Franklin Hotel, Philadelphia, Pa., Nov. 29-Dec. 1.

NATIONAL SOCIETY OF PROFESSIONAL ENGINEERS, 10th annual convention, Hotel Commodore, New York, N. Y., Dec. 1-2.

AMERICAN SOCIETY OF CIVIL ENGINEERS, annual meeting, Hotel Commodore, New York City, Jan. 17-19, 1945.

Regional and Local

MISSISSIPPI VALLEY ASSOCIATION, 26th annual convention, Hotel Statler, St. Louis, Mo., Nov. 26-27.

ILLINOIS SEWAGE OPERATORS' ASSOCIATION, annual conference, Leland Hotel, Springfield, Ill., Nov. 28-29.

CONFERENCE ON INDUSTRIAL WASTE UTILIZATION, sponsored by the Sanitary Engineering Department, School of Civil Engineering and Engineering Mechanics, Purdue University, and others, Purdue University, Lafayette, Ind., Nov. 29-30.

MIDDLE ATLANTIC SECTION, SOCIETY FOR THE PROMOTION OF ENGINEERING EDUCATION, fall meeting, 330 West 42nd St., and Hotel Astor, New York, N. Y., Dec. 2.

NEW YORK STATE HIGHWAY CHAPTER, ASSOCIATED GENERAL CONTRACTORS OF AMERICA, 19th annual meeting, DeWitt Clinton Hotel, Albany, N. Y., Dec. 6-7.

ASSOCIATED GENERAL CONTRACTORS OF MINNESOTA, 26th annual meeting, St. Paul Hotel, St. Paul, Minn., Jan. 11-13, 1945.

• • •

House to act this week on postwar road bill

The House has completed legislative right-of-way whereby it will consider postwar highway bills this week. One bill, S. 2105, has already been passed by the Senate. The House will not only have an opportunity to act on that measure, but will be free to consider its own highway bill, H.R. 4915, which has been on the House calendar since June 5.

CONSTRUCTION REPORTS

Compiled by Business News Department—Engineering News-Record, 330 W. 42nd St., New York 18, N. Y.

ELSIE EAVES, Manager — *SCOTT McLEOD, Statistics* — *J. A. MAHONEY, Reports*

(Daily service also available—Write for details)

WATER SUPPLY

PROPOSED WORK

Conn., New London—City, Street & Water Dpt., Municipal Bldg., water sys., 12 in. watermain to Ocean Beach Park, and changes at purification plant. $15,000.

Ill., Charleston—T. Walton, city clk., Charleston, rejected bids Oct. 19, 3 new earth dams, Embarras River, near S. A. Route 130, 2 mi. south east of here. $165,000. Will readvertise. CD 10/9—ENR 10/12.

Ill., Marion—City, City Hall, plans 75% completed, installing new filters, and making present water plant bldg. 2 stories. $65,000. Denver L. Horner, city engr.

Ill., Oak Lawn—City, City Hall, addnl. water supply source by hooking on to Chicago sys., exten. watermains. $100,000. Edwin Hancock Engineering Co., 1509 W. Jackson St., Chicago, engrs.

Ind., Salem—Town Bd., surveys, WW, dam across Blue River, pump. plant, filtration and softening plant, reservoir, distr. sys. Warren & Van Pragg, Standard Office Bldg., Decatur, Ill., engrs.

†**La., New Orleans**—Pub. Housing Auth., NHA, 1205 Electric Bldg., 7 and Taylor Sts., Fort Worth 2, Tex., ground storage water reservoir, booster pump. sta., relocating and raising elevated tank, approx. 3,960 ft. 10 in. supply main, sewage pump. sta. with pump. equip. and approx. 6,000 ft. 8 in. pressure discharge line to connect to Higgins sewage disposal sys., La. 16-265-F. $81,545.

Minn., South International Falls—Village, E. Lynch, clk., WW sys. $20,000.

O., Bellevue—R. L. Wager, city service dir., City Hall, voted bonds and takes bids next spring 3 new pump. stations and water lines. $405,000. CD 5/26—ENR 6/1.

Okla., Tulsa—Made preliminary plans earthen storage reservoir addn., Mohawk Park. $400,000. W. F. McMurray, City Hall, engr.

Pa., Bethlehem—City, City Hall, watermains, various streets. $165,000. R. L. Fox, City Hall, engr.

Pa., Freeburg — Borough, Borough Hall, concrete water supply sys. $350,000.

†**Tenn., Oliver Springs**—Town, constructing approx. 9,600 ft. 4 in. water pipe from spring supply to present pump. plant, appurtenances, chlorinator equip., Tenn. 40-276-F. $21,600. **FWA.**

†**Tex., Bay City**—City, City Hall, WW imprvs., new water well complete with pump. equip., 250,000 gal. storage reservoir, high service pump. facilities, addns., extens., appurtenances, sewerage collection sys. extens., 2 lift stations, disposal plant addns., alterations and repairs, appurtenances and incl. rights-of-way, Tex. 41-702-N. $305,000. **FWA.** CD 9/28—ENR 10/5.

Tex., Sweetwater—R. C. Hoppe, city mgr., City Hall, pump. equip., incl. pump. station and sedimentation basin, increasing water supply $46,750. Applied for FWA funds.

BIDS ASKED

Bids Asked November 28

Ind., Speedway City—Town Bd., WW exten., well house, 4,600 lin. ft. 8- to 12-in. c.i. watermains, $26,000. Plans deposit $15. L. I. Couch, 227 W. Edwards St., Indianapolis, consult. engr.

Bids Asked December 13

★**Tex., Wichita Falls**—City, Geo. D. Fairtrace, city mgr., City Hall, Contr. 1, water supply imprvs., incl. 38,461 cu. yd. core trench excav., 898,112 cu. yd. earth embankment, 42,250 sq. yd. gravel blanket, 26,250 sq. yd. rock rip rap, etc., Plans deposit $75; Contr. 2, incl. 5,000 acres clearing in lake basin, 25 mi. barbed wire fencing. **$2,500,000** bonds voted. H. J. Gates, City Hall, Water Dpt. engr. CD 9/28—ENR 10/19, under Postwar Projects.

Bids Asked December 18

Ill., Chicago—City, O. E. Hewitt, comr. P. Wks., City Hall, filter and accessory equip. and materials, South Dist. Filtration Plant, Lake Front east of South Shore Dr. and north of 79 St. Plans deposit $25; adv. ENR 11/23.

Bids Asked January 2

Calif., Tracy—City, Chas. F. DeFreitas, clk., City Hall, watermain extens., in Parker Acres. J. S. Bates, 3134 Eton Ave., Berkeley, engr.

Symbols and Abbreviations Include:

† Federal Government
★ Project of $500,000 or over
ENR Engineering News-Record
CD Engineering New-Record Construction Daily

Projects—By Size

Construction projects here reported cover the United States and Canada, are of these minimum sizes or larger: water supply, earthwork, waterworks, $15,000; other public works, $25,000; industrial buildings, $40,000; other buildings, $150,000.

Classes of Construction

(Name in order of Listing)

Water Supply
Sewers, Waste Disposal
Bridges
Streets & Roads
Earthwork, Waterways
Latin America
Public Buildings
Commercial Buildings
Industrial Buildings
Unclassified

Stages Reported

PROPOSED: (except Streets & Roads):
BIDS ASKED (new announcements only. For full calendar, see also preceding issues of ENR);

LOW BIDDERS: On jobs below $500,000 value all low bidder news will be the final reports published on the projects involved except where award is not made to the low bidder. In this case, a supplementary contract award report will be published.

CONTRACTS AWARDED: Except awards to low bidders previously reported in low bidder stage.

Dates shown are of issue in which last previous report was published.

CONTRACTS AWARDED

†**Ind., Crane**—Yards & Docks, Navy Dpt., 18 St and Constitution Ave. N.W., Wash. 25, D. C., water sys., Naval Ammunition Depot, NOY 11044, to Weikel Constr. Co., 1050 Fairview Ave., Fort Wayne, Zone 8, $89,147.

Ind., Kingman—Town Bd., E. Alward, clk., WW sys., to G. H. Leach Co., Bellefontaine, O., $42,000. Est. $60,000. Awarded 11/9. CD 10/16—ENR 10/19.

Ind., Richmond—Bd. P. Wks., J. R. Britton, mayor chn., City Hall, WW imprvs., cooling towers, to Marley Co., inc., 3001 Fairfax Rd., Kansas City, Mo. $42,830, Est. $65,000. Bids 11/1, awarded 11/9. CD 10/23—ENR 10/26.

N. C., Charlotte—R. W. Flack, city mgr., 18,850 ft. c.i. pipe, and 1,850 ft. 30 in. c.i. pipe for water supply around raw water reservoir and distr. water lines, to Lynchburg Foundry Co., Lynchburg, Va., $41,023 and $16,558 respectively. Bids 11/6. CD 10/30—ENR 10/19.

†**Utah, Tooele**—U. S. Eng., 580 S. State St., Salt Lake City, water sys. at Tooele Ordnance Plant, to Horman Constr. Co., 1514 Mill Creek Way, Salt Lake City, $53,210. Bids 11/4.

SEWERS, WASTE DISPOS

PROPOSED WORK

Calif., Walnut Park—Bd. Supervs. Angeles Co., Hall of Records, Los A rejected bids Nov. 8, storm drain, Compton Creek 1 Drainage Sys., near Will readvertise in April. A. Jones, of Records, Los Angeles, engr. CD under LB.

Minn., Red Wing—City, H. E. Nord clk., bond election in April, sewage di plant. $175,000-$250,000.

O., Cleveland—F. Foy, city purch City Hall, repairing sewers damaged b explosion in Norwood Rd. Dist. $1 J. C. Wenrick, City Hall, city engr.

O., Lakewood—City, A. Kauffman, m 14532 Lake Ave., voted bonds and will plete plans and take bids next spring. tary and storm sewers in Nicholson Dist. $280,000. E. A. Fisher, City city engr. CD 9/14—ENR 9/21.

†**Tex., Texas City**—City, storm s $100,000. **FWA.** Haile & McClendon, San Jacinto St., Houston, engrs. CD 1 ENR 10/26.

Ont., Hamilton — Bartow Twp., Broughton, clk., 9 and 15 in. sewers, 000. Mac Kay & Mac Kay, 304 Im Bldg., engrs.

BIDS ASKED

†**Colo., Fort Logan**—U. S. Eng., St., Denver, sludge digester.

LOW BIDDERS

Calif., Burbank—City, H. I. Stites, City Hall, Nov. 9, 5,600 lin. ft. 6 and vitr. clay sanitary sewer in Screenland and Clarke Ave., from B. Boanyas, Worthen Ave., Los Angeles. $29,733.

Calif., Los Angeles — Bd. Supervs. Angeles Co., Hall of Records, Los An Nov. 14, sanitary sewers, watermain Garfield Ave., Motz, Marcelle and W Sts., etc., C.I. 1098, from G. Miller W. Silver Lake Dr., $34,708.. Est. CD 10/23—ENR 10/26.

Tex., Houston—City, M. H. Weste secy., City Hall, Nov. 8, Ingraham storm sewer, from Elder Constr. Co., Carrolton St., $288,885. CD 11/1.

BRIDGES

PROPOSED WORK

Oklahoma—State Hy. Dpt., Oklahoma making plans overpass over Rock I main line, near Yukon, Canadian Co. 000. H. E. Bailey, Oklahoma City, eng

Okla., Oklahoma City—Oklahoma Oklahoma City, steel, rein.-con. bridge North Canadian River, E. 10 St. C. W. McPherron, Court House, engr.

BIDS ASKED

Bids Asked November 28

Kansas—State Hy. Dpt., Wichita, structure Derby Bridge, two 75 ft. and 90 ft. continuous steel I-beams, 0.11 ST WE R 3, Sedgwick Co. R. C. Kes Topeka, engr.

STREETS AND ROADS

BIDS ASKED

Bids Asked November 27

N. Y., New York—President Manh Boro, Municipal Bldg., Zone 7, wid 1½ in. sheet asphalt on concrete, re E. 41, E. 65, W. 37 and W. 52 Sts in. sheet asphalt on concrete paving, nett Ave., Leroy, Ludlow, W. 54, W. 104, W. 107, W. 148, W. 164 and 177 Sts.

Bids Asked November 28

Virginia—State Dpt. Hys., Richm variable depths stabilized base mater mi. Route 600, Northampton Co. Int Intersection Rt. 621, Accomack Co.

Bids Asked November 29

Louisiana—State Dpt. Hys., Baton R grading, surfacing, drainage structures mi. Maneuver Area Roads, Group 12, 1, 2 and 3, State Route 104, S.P. 737- Beauregard and Calcasieu Parishes deposit $1; shaping, concrete paving, surfacing, drainage structures, etc. mi. State Routes 22, 42, 52, 151 and S.P. 737-00-18, Maneuver Area Roads, 13, Sects. 1, 2, 3, 4, 7, 10 and 12, Be gard and Allen Parishes, Plans deposit

...TS, etc. (Bids Asked, Cont'd.)

Bids Asked December 1

...sota—State Hy. Dpt., at District ...Owatonna, crushing, screening, load... ...ding about 23,000 cu. yd. gravel for ...ion mineral aggregate to be placed in ...e for Maintenance Div., Owatonna. ...O. L. Kipp, ch. engr, State Hy. Dpt.

Bids Asked December 6

...nia—State Div. Hys., Sacramento, ...on crusher run widening and ...concrete to be placed over exist... ...facing 0.9 mi. between University ...d El Cerrito Hill Overhead, Alameda ...T. McCoy, Public Wks. Bldg., Sacra... ...state hy. engr.

Bids Asked

...ia—State Rpt. Hys., Richmond, re... ...bids Nov. 9, imprv. 2.3 mi. Louisa Co. ...13—ENR 11/16, under LB.

...RACTS AWARDED

...t, San Diego—Yards & Docks, Navy ...16 St. and Constitution Ave. N.W., ...n, D. C., grading, paving parking ...11th Naval Base, Spec. 15476, NOY ...to J. A. Casson Co. & N. M. Ball ...22105 Meekland Ave., Hayward, ...1977. Bids 10/30. CD 11/2, under LB.

...sota—State Hy. Dpt., at District ...Willmar, crushing, screening, hauling, ...r and stockpiling 17,800 cu. yd. gravel ...duction mineral aggregate for traffic ...wearing course for Maintenance Div., ...ar, Kandiyohi Co., to J. H. Ganley, ...Hampden Ave., St. Paul, **$25,653**, Bids ... State Hy. Dpt. at District Office, ...49,000 cu. yd. gravel for Main... ...Div., Duluth, St. Louis Co., to J. W. ...Co., 1314 N.E. California St., Minne... ...and Fielding & Shepley, 1258 Bohn ...Paul, **$46,992**, Bids 11/6. CD 10/18—...10/26.

...s., Fort Worth—U. S. Eng., 25 St. ...d Avenue F, Galveston, grading, pav... ...utside utilities, at Aircraft Assembly ...Ser. No. 41-242-45-68, to Texas Bi... ...ic Co., 111 Commerce St., Dallas, ...Bids 11/3. CD 11/13—ENR 11/16, ...LB.

...inia—State Dpt. Hys., Richmond, ...1.2 mi. Accomack Co., to W. H. ...Inc., Franklin, **$344,363.** Bids 11/9. ...13—ENR 11/16, under LB.

...ming—Wyoming Hy. Comn., Chey... ...grading, draining, base course surfac... ...miscellaneous work 22.731 mi. Rock ...n-Hiawatha Dome Oil Field Access ...DA-RM 30 (1), Sweetwater Co., to ...ins & McPherson, Laramie, **$89,591.** ...11/14, awarded 11/14. CD 11/8.

...s., Cap de La Madeleine—City, F. ...ier, clk., street paving, day labor, ...00.

...ITHWORK, WATERWORKS

...POSED WORK

...f., Glendale—Los Angeles Co. Flood ...ol Dist., 751 S. Figueroa St., Los ...es, Zone 14, rejected bids Oct. 31, ...Canyon Debris Basin. Will readver... ...M. E. Salsbury, engr. CD 11/8—ENR ...under LB.

...f., Sierra Madre—Los Angeles County ...Control Dist., 751 S. Figueroa St., ...ngeles, Zone 14, rejected bids Oct. 24, ...y Canyon Debris Basin, near here. ...readvertise. M. E. Salsbury, engr. CD ...—ENR 11/2, under LB.

...s, Texas City—City, drainage ditches. ...0 or more. Applying for FWA funds. ...& McClendon, 2807 San Jacinto St., ...ton, engrs. CD 10/24—ENR 10/26.

...a., Edmonton — Province of Alberta, ...nton, irrigation dam in southern Al... ...$300,000 voted.

...d., Southampton — L. MacAuley, mu... ...dity, clk., retaining wall and recon... ...ing dock. $40,000. Dpt. P. Wks., Ot... ...engr.

...ASKED

Bids Asked December 4

...w Jersey—Dpt. Conservation & Devel... ...nt, C. P. Wilber, dir., State House ...s, Trenton, repairing, imprv. Trenton ...n Delaware and Raritan Canal Feeder ...pprox. 3 mi. Plans deposit $10; adv. ...11/23.

...BIDDERS

...f., Ventura—Clerk Ventura Co., Court ..., Nov. 14, 0.6 mi. river bank protection ... levee and 2 wing dams at Los Angeles ...from E. G. Perham, 1138 Stearns Dr., ...ngeles, **$37,822.**

...raska—State Dpt. Rds. & Irrigation, ...n, Nov. 3, protection work, WER-4-A ...58-C, Fremont-Arlington, Dodge and ...ington Counties, from Bushman Constr. ...5 and Felix Sts., St. Joseph, Mo., ...a, W. G. Scott, state engr.

CONTRACTS AWARDED

†Illinois—U. S. Eng., 816 U. S. Courthouse & Customhouse, St. Louis 2, Mo., repairing approx. 31,500 lin. ft. wave washed levees and placing about 126,500 cu. yd. earth, Alexander and Union Counties, Neg. 23-065-45-50, to C. T. Wilson Constr. Co., 10200 St. Arthur's Lane, St. Louis County, St. Louis, Zone 14, **$53,855.** Bids 11/4.

La., Venice—Plaquemines Parish, c/o Police Jury, Court House, pump. sta., rein.-con. fdn. (for power pumping plant), to McDonough Constr. Co., Algiers, New Orleans, **$25,000.** Bids 10/31. CD 10/11—ENR 10/19.

†Missouri—U. S. Eng., 816 U. S. Courthouse & Customhouse, St. Louis, Zone 2, levee repairs involving 85,000 cu. yd. earth, Neg. No. 23-065-45-44, Ste. Genevieve Co., to J. Pohl, Nevada, **$30,855.**

LATIN AMERICA

Argentina, Cordoba—Republic of Argentina, Buenos Aires, plans railway wheel and axle works on 9,000 sq. meter site. $350,000. Administration of State Railways, Buenos Aires, engr.

Brazil, Barrancabermega—Municipality, plans WW sys. Voted 300,000 pesos.

Brazil, Iguape—Companhia Nacional de Alcalis, Iguape, plans plant, producing caustic soda and soda ash. $150,000.

Brazil, Rio de Janeiro—Societe Anonyme do Gaz, Rio de Janeiro, plans plant for purification of benzol, naphthalene, tutuol and allied products from coal-tar residues and gas. $150,000.

Brazil, Sao Paulo—Fabrica Contra Limitada, Sao Paulo, plans plant for production carbon tetrachloride. $100,000.

B. W. I., Kingston—Jamaica Government, Kingston, plans customhouse and warehouses, $1,000,000; deepwater pier, $3,000,000.

Chile, El Salto—Chilean National Air Lines, Santiago, plans 1 mi. airfield, 984 ft. wide.

Chile, Santiago—Fabrica de fosforos de Carton, Santiago, plans plant producing cardboard, boxes, pyrotechnics, etc. $100,000.

Colombia—Barranquilla Cement Ltd., Barranquilla, plans cement plant and development calcareous deposits at Barranquilla and Puerta Colombia. $250,000.

Colombia—Republic of Colombia, Bogota, plans breakwater at Boca de Ceniza and harbour works at Barranquilla. 300,000 pesos.

Colombia, Armenia — Municipality, plans airport. Over $100,000.

Colombia, Buga—Municipality, plans airport. Over $50,000.

Colombia, Cali—Municipality, plans transmission and distr. lines from Anchicaya electric project to city and public and domestic service connections. $150,000.

Colombia, Cali — Republic of Colombia, Bogota, plans completion hydro-electric project in Anchicaya area. $2,578,000.

Colombia, Casadero—Aerolvas Nacionales de Colombia, Bucaramanga, Dpt. Santandar, plans airfield. $150,000.

Colombia, Jamundi—Aeroclub Colombiana, Cali, plans aerodrome. $150,000.

Colombia, Manizales — Municipality, purchased site at Santa Agueda, for airport. $150,000.

Colombia, Pasto—Municipality, plans airport. Over $100,000.

Colombia, Paz del Rio—Republic of Colombia, Bogota, plans 20,000 kw. (ultimately 60,000 kw.) hydro-electric plant. $900,000.

Colombia, Pereira — Municipality, plans airport. $50,000.

Colombia, Tulua—Municipality, plans airport. $50,000.

Costa Rica, El Coral—Government of Costa Rica, San Jose, plans plant for preparing and processing fish products. $100,000.

Ecuador, Quito—Republic of Ecuador, Quito, plans rural schoolhouses. 2,500,000 sucres.

Guatemala, Guatemala City—Government of Republic, Guatemala City, plans housing construction. $200,000.

Mexico, Atenquique—Republic of Mexico, Mexico City, plans plant manufacturing chemical and mechanical pulp, paper and by-products. $200,000; plans hydro-electric plant, 5,000,000 pesos.

Mexico, Guadalajara—Town of Guadalajara, and Dpt. Pub. Works & Communications, Mexico City, plan hydro-electric power plant. $750,000.

Mexico, Hermosillo—Republic of Mexico, Mexico City, plans textile plant, with initial installation 400 automatic looms. $200,000.

Mexico, Matamoros—Dpt. P. Wks. & Communications, Mexican Federal Govt., Mexico City, plans airfield imprvs. Over $80,000.

Mexico, Mexico City—"La Perfeccionadora" Knitting Mills, Mexico City, plans expanding knitting mill. $375,000.

Mexico, Mexico City—Worlds Fair, S. A., Mexico City, plans factory enlargement. $300,000.

Mexico, Monterrey—La Leona Textile Factory, Monterrey, plans textile mfg. plant. $350,000.

Mexico, Nogales—Dpt. Pub. Works & Communications, Mexican Federal Govt., Mexico City, plans imprv. airfield. Over $100,000.

Mexico, Piedras Negras—Dpt. Pub. Works & Communications, Mexican Federal Govt., Mexico City, plans repairing, imprv. airfield, $100,000.

Panama, Panama City—**Asserradero Nacional S.A.**, Panama, plans saw mill at San Francisco, near here. $50,000.

Panama, Panama City — Municipality, plans 6 story, bldg. accommodating professional men, medical and dental clinics and private business men. $200,000.

PUBLIC BUILDINGS

PROPOSED WORK

†Calif., Bakersfield—Dpt. Agriculture, Emergency Rubber Project, 315 W. 9 St., Los Angeles, rejected bids Nov. 8, rubber extraction plant. Will readvertise. CD 11/15, under LB.

†Calif., Bakersfield—Pub Housing Auth., NHA, Phelan Bldg., 760 Market St., San Francisco, 25 family stop-gap dwelling units, Calif. 4957.

†Calif., San Francisco—Pub. Housing Auth., NHA, Phelan Bldg., 760 Market St., plans by G. E. Ellinger, C. H. Lee, and J. H. Mitchell, 369 Pine St., 435 family dwelling units for Navy personnel, Calif. 4896-N. CD 11/8—ENR 11/16.

†Calif., Sausalito—Sausalito School Dist. of Marin Co., Sausalito, child care bldg., Calif. 4-673-F. $13,300. **FWA.**

Colo., Boulder—University of Colorado, Boulder, plans by Chas. Z. Klauder, 1429 Walnut St., Phila., Pa., 300 women students dormitory, $300,000.

★**D. C. Wash.**—Engineer Dept., Chief Clerk, District Bldg., school, $346,500; school, $361,500. Applied for FWA funds.

†Fla., Fort Myers—Pub. Housing Auth., NHA, Georgia Savings Bank Bldg., Peachtree and Broad Sts., Atlanta, Ga., 50 family stop-gap dwelling units, Fla. 8260.

†Fla., Orlando—City, City Hall, recreation bldg., Fla. 8-329-N. $32,100. **FWA.**

†Fla., Panama City—Bay County School Bd., Panama City, bids soon, school. $93,000. **FWA.**

†Mo., St. Louis County — St. Vincent's Sanitarium, St. Louis Co., nurses home and training facilities, Mo. 23-297-N. $173,000. **FWA.**

N. J., Cedar Grove—Bd. Educ., Cedar Grove, plans by F.A. Elsasser, 1009 Stuyvesant Ave., Union, school addn., alterations. $190,000.

†N. Y., Fort Totten (Sta. Flushing)—U. S. Eng., 120 Wall St., New York, Zone 5, bldg. addns., alterations. $19,000.

†N. Y., Rensselaer—U. S. Eng., 120 Wall St., New York, Zone 5, storage bldg. $20,000.

†N. Y., Syracuse—U. S. Eng., 120 Wall St., New York, Zone 5, storage bldg. $40,600.

O., Lima—Lima Memorial Hospital, W. C. Hansberger, secy. Bd. Trustees, voted bonds hospital addn., remodeling nurses' home. $390,000. Will apply to FWA. Thos D. McLaughlin Assoc., Dominion Bldg., archts. CD 8/24—ENR 8/31.

†S. C., Anderson—Anderson County Hospital Assn., F. R. Wrenn, pres., Anderson, bids soon nurse's home at County Hospital, S. C. 38-245-N. $117,280. **FWA.** Plans deposit $25. C. W. Fant, 109½ Sharpe St., archt. CD 9/28—ENR 10/5.

†Tex., Galveston—U. S. Eng., 25 St. and Avenue F, Galveston, medical supply bldg. Over $40,000.

†Tex., Waco—U. S. Eng., Fort Sam Houston, 6 boiler rooms under each of 6 hospital bldgs., for gas-fired heating sys., incl. installation heating sys., Ser. 41-154-45-54. Over $40,000.

†Tex., Waco—U. S. Eng., Fort Sam Houston, bids soon heating installation in Waco Annex, McCloskey General Hospital, 6 bldgs., Ser. 41-154-45-54. CD 11/15.

†Utah, Clearfield—Bd. Educ. Davis Co. school, and 1 story Junior High School addn., Utah, 42-189-N. $147,480. **FWA.**

†Va., Arlington—Arlington County School Bd., Arlington, 1 story, part bamnt. school, near 24 St. S. and Seminary Rd. as annex to Kemper School, Va. 44-369-N. $90,000. **FWA.**

PUBLIC BLDGS. (Proposed Work, Cont'd.)

Va., Marion—State Hospital Bd., Marion, plans by Wiley & Wilson, Peoples Natl. Bank Bldg., Lynchburg, hospital and receiving unit. $275,000.

★†**Va., Staunton**—Bd. Directors Virginia State Hospital, 309 N. 12 St., Richmond, plans by Marcellus Wright & Son, 1103 E. Main St., Richmond, hospital addn. $962,000. CD 3/6—ENR 3/9.

†**Wash., Seattle**—Pub. Housing Auth., NHA, Skinner Bldg., 5 Ave. and Union St., Zone 1, 120 unit single person housing, Wash. 45272.

Ont., Burlington—School Bd., R. Alton, secy., central heating sys. $40,000.

Ont., Forest Hill (Postal Dist. Toronto)—Municipality, plans by Page & Steel, 20 W. St. Clair Ave., Toronto, centre bldg., Eglinton Ave. $300,000. N. MacNicol, 333 Lonsdale Rd., engr.

Ont., Haileybury—Province of Ontario, c/o Ministry of Educ., Queens Park, Toronto, mining and metallurgical technical institute. $150,000.

Ont., Oshawa—General Hospital Bd., Oshawa, rejected bids Sept. 6, 4 story, rein.-con., brick nurses' home. $150,000. Will readvertise. H. J. Smith, 62 E. Charles St., Toronto, archt. CD 9/7—ENR 9/14.

BIDS ASKED

Bids Asked November 29

N. Y., New York—Dpt. P. Wks., State Office Bldg., Albany, altering office bldg., 80 Centre St. Dpt. Architecture, C. J. White, comr., State Office Bldg., Albany, archt.

N. Y., Poughkeepsie—Dpt. Mental Hygiene, State Office Bldg., Albany, Chemical Storage Bldg. 771, at State Hospital, $11,800. Rejected bids 10/18. C. J. White, comr. Architecture, Div. Architecture, State Office Bldg., Albany, archt. CD 10/13—ENR 9/28.

Bids Asked In December

†**Mass., Everett (br. Boston)**—City, Mayor's Office, City Hall, brick, concrete nurses' home, Mass. 19-196-N. $65,000. **FWA.** Bids for Nov. 16 recalled. James H. Ritchie & Associates, 20 Newbury St., Boston, archts. CD 11/9—ENR 11/2.

Bids Asked December 1

†**Md., Cumberland**—Pub. Bldgs. Admin., 18 and F Sts. N.W. Wash. 25, D. C., 1 story, cadet nurses dormitory and teaching bldg., incl. relocating prefabricated dormitory unit from Dublin, Va. to serve as top story of new bldg. at Allegheny Hospital, Md. 18-202. **FWA.**

Bids Asked About December 2

†**Miss., Pascagoula** — Pascagoula Rural Separate School Dist., 1 story Junior High School, Miss. 22-210. **FWA.** Hedrick & Lindsley, Inc., 818 Southern Standard Bldg., Houston 2, Tex., archts. CD 9/22—ENR 9/28.

Bids Asked About December 4

†**Ga., Atlanta**—Pub. Bldgs. Admin., 18 and F Sts. N.W., Wash. 25, D. C., 5 story, bsmnt., nurses home at Grady Memorial Hospital, Ga. 9-283. **FWA.** Robert & Co., Inc., Bona Allen Bldg., archts. CD 11/10—ENR 11/16.

Bids Asked December 5

†**Va., Front Royal**—Pub. Housing Auth., NHA, Georgia Savings Bank Bldg., Peachtree and Broad Sts., Atlanta 3, Ga., assembly, transportation and erecting 120 family dwelling units together with facilities, site imprvs. and constructing community bldg., Va. 44-44331. Plans deposit $50. W. N. Denton, Jr., 1719 Eye St. N.W., Wash., D. C., archt.

Bids Asked December 7

★†**Va., Martinsville**—Martinsville General Hospital, Inc., Peoples Bank Bldg., 3 story hospital, and 2 story nurses home, VA. 44-370. $622,000. **FWA.** Plans deosit $50. A. M. Lublin, 610 Taylor Bldg., Norfolk, archt. CD 9/11—ENR 9/14.

Bids Asked About December 9

†**N. C., Morehead City**—Pub. Bldgs. Admin. 18 and F Sts. N.W., Wash. 25, D. C., 3 story, addn. Morehead City Hospital, N. C. 31-292. **FWA.** G. W. Carr, Durham, archt. CD 8/30—ENR 9/7.

Bids Asked December 12

La., New Orleans—Housing Auth. of New Orleans, 226 Carondelet St., demolishing and replacing with steel frame and concrete porches on St. Thomas Street Project La-1-1. Plans deposit $5.

Bids Asked December 13

†**D. C., Wash.**—Pub. Housing Auth., NHA, Longfellow Bldg., 1201 Connecticut Ave. N.W., Zone 25, 300 permanent and semi-detached dwelling units, D. C. 1-6. CD 10/25—ENR 11/2.

Bids Asked December 14

N. Y., Brooklyn—Port of New York Auth., 111 8 Ave., New York, Zone 11, storage warehouse and garage. Contr. 6 T-6. Extended date; adv. ENR 11/23. CD 10/31—ENR 11/2.

LOW BIDDERS

★†**Calif., Los Angeles**—Queen of the Angeles Hospital, 2301 Bellevue Ave., Nov. 14, 8 story, rein.-con. hospital bldg. addn., Calif. 4-626-N, from J. E. Haddock, 3538 East Foothill Blvd., Pasadena, **$625,300. FWA.** CD 11/1.

†**Calif., San Bernardino**—Pub. Bldgs. Admin., 18 and F Sts. N.W., Wash. 25, D. C., Nov. 4, 40-bed isolation ward at county hospital, Calif. 4-494, from Continental Contg. Co., Fort Dodge, Ia., **$149,850. FWA.** CD 10/25—ENR 11/2.

Calif., San Bruno—Pub. Housing Auth., NHA, 760 Market St., Phelan Bldg., San Francisco, Nov. 11, 176 unit temporary family dwelling units, Calif. 4891-N, from Erbentraut & Summers, 446 Sixth St., San Francisco, **$461,800.** CD 10/17—ENR 10/19.

†**Mich., Royal Oak**—Pub. Housing Auth., NHA, 2072 E. 9 St., Cleveland, O., Nov. 2, brick, steel, rein.-con. school for Royal Oak Twp. from Emil Van Sile Co., 3443 E. Canfield St., Detroit. **$345,690.** CD 9/7—ENR 9/14.

†**Md., Indian Head**—Yards & Docks, Navy Dpt., 18 St. and Constitution Ave. N.W., Wash. 25, D. C., Nov. 13, addnl. magazines for rocket powder at Naval Powder Factory, NOY 10659, from James Stewart & Co., 230 Park Ave., New York, N. Y., **$146,630.** CD 11/9.

†**Pa., Chester**—Bd. Educ., Town Hall, Nov. 13, Clayton Grade School addns., Pa. 36-244 N, and Booker T. Washington School, Pa. 36-259-N, from J. Marcellus & Co., Inc., 5317 Master St., Phila., **$157,719. FWA.** CD 10/10—ENR 10/12.

CONTRACTS AWARDED

★†**Calif., Lynwood**—Sisters of St. Francis, c/o Geo. J. Adams, archt., 118 E. Los Feliz Rd., Los Angeles, St. Francis Hospital, Calif. 4-599-N, to J. K. Thomas & Theo. Beyer, Chamber of Commerce Bldg., Los Angeles, **$568,322. FWA.** Bids 11/7. CD 11/10—ENR 11/16, under LB.

★†**Mich., River Rouge (br. Detroit)**—U. S. Eng., 700 Union Guardian Bldg., Zone 31, Detroit, storage warehouses and storage areas, to Bryant & Detwiler Co., 2304 Penobscot Bldg., Detroit. **$772,264.** (**Correction**—location of project. ENR 11/16).

†**Mo., St. Louis**—U. S. Eng., 816 U. S. Courthouse & Customhouse, Zone 2, electrical work in Bldg. 3, St. Louis Ordnance Plant, to S. C. Sachs Co., 2022 N. 9 St., Zone 6, **$189,450.** Bids 11/1.

★†**N. J., Linden**—U. S. Eng., 120 Wall St., New York 5, N. Y., storage bldgs., to Del Balso Const. Corp., 220 E. 42 St., New York 17, N. Y., **$1,086,628.** Bids 11/9. CD 11/2.

★†**N. M., Eunice**—Panhandle Carbon Co., Inc., 295 Madison Ave., New York, N. Y., design and construction lightweight structural steel, sheet metal siding carbon black plant, to United Engineers & Constructors, Inc., 1401 Arch St., Phila., Pa. Est. **$1,000,000.** Defense Plant Corp. will finance. CD 11/9—ENR 11/16.

★†**N. M., Monument**—Chas. Enew Johnson Co., Monument, design and construction, light weight structural steel, sheet metal siding carbon black plant, to United Engineers & Constructors, Inc., 1401 Arch St., Phila., Pa. Est. **$1,000,000.** Defense Plant Corp. will finance.

N. Y., Brooklyn—Exec. Dir. Port of New York Auth., 111 8 Ave., New York, Zone 11, reconstructing explosion walls of Gowanus Bay grain terminal to Woodcrest Constr. Co. Inc., 369 Lexington Ave., New York, Zone 17, **$72,999.** Bids 11/2. CD 10/17—ENR 10/19.

†**Utah, Clearfield**—Yards & Docks, Navy Dpt., 18 St. and Constitution Ave. N.W., Wash. 25, D. C., concrete servicing open storage, Naval Supply Depot, NOY 11145, to Gibbons & Reed Co., 259 W. 3 St., Salt Lake City, **$141,193.**

†**Wis., Merrimac**—U. S. Eng., 408 Federal St., Milwaukee, erecting 250 prefabricated bldgs. for housing, Wis. 47080, to Mayfair Const. Co., 5660 N. Kedzie Ave., Chicago, Ill., **$129,000**; grading, utilities, road work, walks and bldg. foundations, to W. J. Lazynski, Inc., 906 E. Center St., Milwaukee, Zone 6, **$384,539.** Bids 9/21, taken by Pub. Housing Auth., rejected. CD 11/8—ENR 11/16, under CA.

COMMERCIAL BUILDINGS

PROPOSED WORK

Calif., Paso Robles—John B. Livingston Foundation, Paso Robles Housing Auth., and City of Paso Robles, plans by R. Stanton, Pebble Beach, for John B. Livingston Memorial Hospital, rein.-con. Terrace Hills. $250,000. Applying for FWA funds.

★**Md., Silver Spring**—A. S. Kay, 4800 17 St. N.W., Wash., D. C., clubhouse, $700,000, 1,500 persons capacity swimming pool, 7 tennis courts, at Indian Spring County Club, Colesville rd.

Mich., Ann Arbor—Loyal Order of Moose, Ann Arbor, preparing plans 2 story, [illegible] ft., brick, steel, rein.-con. bldg. $[illegible]

Mich., Hillsdale—Hillsdale College, Hillsdale, brick, steel, concrete dorm. $150,000.

N. J., Somerville—Somerset Hospital, [illegible] hill Ave., rejected bids Nov. 9, service Crow, Lewis & Wick, 200 5 Ave., New 10, N. Y., archts. CD 11/2/43—9/23/43.

O., Cleveland—Karamu House, R. [illegible] eliffe, exec. dir., 2239 E. 38 St., plans K. Draz & A. Scholl, engrs.-archts., Euclid Ave., 2 story, bsmnt. child care ter, brick, steel, concrete; plans theatre arts bldg., $190,000; administration community bldg., $150,000; music and cational bldg., $150,000.

Pa., Huntingdon—Juniata College, H[illegible] ingdon, plans by Hunter & Caldwell, 5 Ave., Altoona, brick college a[illegible] $150,000.

★**Pa., Phila.**—Temple University Hos[illegible] Dr. W. N. Parkinson, dean, Brook Ontario Sts., sketches by Zantzinger Borie, 1531 Locust St., brick, struc steel, concrete, probably limestone limestone trim, hospital. $2,000,000.

Tex., Beaumont—H. A. Perlstein, [illegible] stein Bldg., plans by W. B. Livesay, Jacinto Life Annex Bldg., Stone & Goodhue Bldg., 5 story, bsmnt. office stores bldg., on existing 6x112 ft. fdn. 57x80 ft. wing. $250,000. CD 8/17—8/24.

Tex., Houston—H. Lloyd, 4605 Main St., 2 story, 95x237 ft., brick veneer a[illegible] ment. $150,000.

Tex., McAllen—McAllen Home Bu[illegible] Inc., 309 N. 8 St., forty 1 story, 5 [illegible] room frame type dwellings. $200,000.

Utah, Provo—Brigham Young Univ[illegible] Provo, 8 bldgs., incl. classrooms, la[illegible] tories, dormitories.

Ont., Ottawa—Nelson Amusement [illegible] Ltd., c/o Mederic Landreville, Albert theatre. $150,000.

Que., Hull—Dom. Constr. Corp., Ltd., Bay St., Toronto, 25 dwellings. $[illegible]

Que., Joliette—Joliette Catholic Sc[illegible] Com., R. Tellier, pres., plans by A. G[illegible] 513 Rachel St. E., Montreal, school residence for teachers, Notre Dame $250,000. CD 11/9—ENR 11/16.

Que., Sillery (Postal Dist. Quebec C[illegible] R. C. Parish of St. Charles-Garnier, Rev. A. Morel, c/o Ste. Jeanne d'Arc vent, Bergerville, plans by C. A. Jo[illegible] Abraham Hill, Quebec City, 45x1[illegible] rein.-con., stone church. $175,000 10/5—ENR 10/12.

Que., Waterloo—Theatres Indepen[illegible] Ltd., Waterloo, theatre. $150,000.

CONTRACTS AWARDED

Ind., Anderson—Meadow Brook H[illegible] Inc., Wm. S. Risley, pres., 3705 Main seventy-five 1 and 2 story, frame, residences, to Synder Constr. Co., Franklin St., Muncie, $450,000. Ar[illegible] 11/9. CD 11/13—ENR 11/16.

La., Monroe—St. Francis Sanitarium, [illegible] roe, 3 story, 40x155 ft., nurses' school, 23x40 ft. wings, to Ford-Bacon & [illegible] Construction Corp., P. O. Box 1762. $[illegible] CD 11/8—ENR 11/16, under LB.

★**O., Cleveland**—Parma Realty Co., [illegible] Smith, 5672 Ridge Rd., 3 stories offices, theatre and recreation bldg., 1 bsmnt., 125x130 ft., stores, brick, steel, crete. Owner builds. Total est. $[illegible] L. Skolnik, 3652 E. 147 St., archt. 5/18/43—ENR 5/20/43.

★**O., Lorain**—Parkview Estates, Inc., Eastern States Home, Inc., A. E[illegible] vice pres., 22 W. 48 St., New York, 99 single dwellings 1½ story, 32x28 brick, frame housing, to J. Aragona, A[illegible] Hotel, Lorain. Total est. $697,000. Everhard, 9219 Clifton Rd., Cleve[illegible] archt.

★**O., Painesville**—West Walnut Ho[illegible] c/o Eastern States Homes, Inc., A. [illegible] zer, vice pres., 22 W. 48 St., New Yo[illegible] N. Y., 120 unit single dwellings, to A. Wolfson, Lawrence Hotel. Total $780,000. CD 9/11—ENR 9/14.

★**Vt., St. Albans**—Kerbs Memorial Hos[illegible] tal, Inc., St. Albans, brick, stone, h[illegible] tal, nurses' home and student schoo[illegible] Turner Constr. Co., 38 Newbury St., ton, Mass. Est. $600,000. CD 1/4-1/13.

Que., Granby—Granby Catholic Sc[illegible] Comn., J. Lemieux, secy. school and dence for teachers, to J. L. Guay et [illegible] Ltd., 437 Guy St., $219,900. CD 11/2[illegible] 11/9.

MERCIAL BLDGS. (Contracts Awarded, ...d.)

...t. Georges West—Reverend Sisters ... Good Shepherd, 31 St. Amalile St., ... City, bldg., to J. Lepage, St. Georges ... Est. $150,000. Reverend Mother Ste. ...ina, Econome, archt.

INDUSTRIAL BUILDINGS

...OSED WORK

...s, Los Angeles — BAKERY — Helms ...ry, 8300 Venice Blvd., plans by Grant ...ssner, engr. and archt., 405 S. Hill ... 1 x 335 ft., concrete, brick bakery ... $74,000.

...ar, San Diego—PLANT BLDGS—...ican Aeronautical Co., 2701 Harbor Dr., ...by F. L. Hope, Jr., 1008 San Diego ...& Savings Bldg., frame, stucco office; ...frame and truss, plaster exterior sub-...ably bldg.; steel frame and truss sal-...bldg.; frame, stucco gate house; 2 ...rein.-con., 30 x 75 ft. template bldg.; ...l heating plant. $1,000,000.

..., Atlanta—PARTS DEPOT—Ford ...tor Co., 3000 Schaefer Rd., Detroit, ...brick, rein.-con. parts depot. $500,-...

...Toulon — FACTORY — Kraft Cheese ...ed Peshtigo Court, Chicago, preparing ... 2 story cheese factory, brick. ...t Graham, Anderson, Probst & ...40 E. Jackson Blvd., Chicago, engrs.

..., Valparaiso—FACTORY—Continental-...and Fibre Co., Valparaiso, plans com-...by F. Douglas Wilson, 510 N. Dear-...St., Chicago, Ill., 1 and 2 story, 50x250 ...rein.-con., structural steel factory. ...00.

...s, Grafton—PLANT—Wyman Gor-...n Products Corp., 105 Madison Ave., ...ester, preparing plans 1 story, 180x400 ...brick, steel, rein.-con. plant, incl. re-...laboratory and forging plant, on ...n and Albany R. R. $2,500,000. J. R. ...ester & Co., 79 Milk St., Boston, engrs. ...1/14—ENR 11/16, under North Grafton.

..., Hyde Park (sta. Boston)—MILL—...r, c/o L. Fink, archt., 131 State St., ...n, 1 story, 63x175 ft. paper mill.

...h., Albion—FACTORY—General Elec-...Co., 1 River Rd., Schenectady, N. Y., ...prepared 1 story, 200x400 ft., brick, ...ete plastics mfg. factory. $250,000.

...h., Chelsea—FACTORY—Federal Screw ...1401 Martin St., Detroit, plans pre-...brick, steel, concrete factory bldgs. ...ant expansion. $400,000.

...h., Detroit—PLANT, etc.—Federal ... Corp., 11031 Shoemaker Ave., 2 brick, ...concrete plant addns. $100,000.

...h., Detroit—PLANT—Park, Davis & ...foot of Jos. Campau Ave., plans pre-...mfg. chemists plant addns., altera-... $70,000.

..., St. Louis — FACTORY — Hudson ...ical Co., 2619 Chouteau Ave., Zone 3, ...ry, brick, concrete factory, mfg. in-...ides, etc., 6567-69 Manchester Ave. ...0 with equip.

..., St. Louis — LABORATORY — Amp ..., 2921 Locust St., Zone 3, plans by ...Bradshaw, 3670 W. Pine Blvd., Zone ...earch and development laboratory on ...acre tract, Southwest Ave., west of ...highway Blvd.

...H., North Rochester—PLANT—Spauld-...fibre Co., Inc., North Rochester, rebuild-...re plant. Over $40,000.

..., J., Bridgeton — PLANT — Seabrook ...arms, Upper Deerfield Twp., sketches ...y, brick freezing bldg., incl. refrigerat-...ng. $500,000. United Engineers & ...tructors, Inc., 1401 Arch St., Phila., ...engr.

..., J., Cranford—PLANT—Johnson & ...on, 500 George St., New Brunswick, ...by Ballinger Co., 105 S. 12 St., Phila., ...mfg. plant. $250,000.

..., J., Lakewood—GARAGE, etc.—Lincoln ...it Co., 310 4 St., sketches by Ballinger ...105 S. 12 St., Phila., Pa., 1 story, ...80 ft., concrete block garage, 1 story, ...ft., brick terminal bldg. $200,000.

...Y., Syracuse—PLANT BLDGS.—Gen-...Electric Co., 1 River Rd., Schenectady, ...by Giffels & Vallet, Inc., engr.-archt., ...Marquette Bldg., Detroit, Mich., brick, ...rein.-con. plant bldgs.

...Cambridge — FACTORY — Reynolds ...on Div. of Continental Can Co., W. W. ...r, ch. engr., 4633 W. Grand Ave., ...go, Ill., revised plans by F. D. Jacobs, ...Main St., Coshocton and bids soon 2 ... 150 x 200 ft., brick, rein.-con. fac-... $135,000.

..., Mt. Vernon — PLANT — Pittsburgh ...ate Glass Co., H. B. Higgins, pres., ...Duquesne Way, Pittsburgh, Pa., plant ... $700,000.

..., Portland — PLANT — New England ...Co., Astoria, 2 story,100x100 ft. ice and ...torage plant. $45,300.

Pa., Bridgeport—BOILER HOUSE—Kurtz Bros., Trout and De Kalb Sts., plans completed by M. A. Bernhardt, 213 S. Broad St., Phila., 1 story, brick, concrete boiler house. $45,000.

R. I., Providence — WAREHOUSE — H. Fisher, 393 Lloyd Ave., brick, steel warehouse, Weybosset St. $40,000.

S. C., Rock Hill—PLANT—Rock Hill Cold Storage, Inc., Rock Hill, bids soon, 1 story, 50 x 75 ft. freezer plant, processing room, curing room and office, brick.

Tex., San Antonio—SHOP—Joe P. Brown Repair Shop, 1923 Fredericksburg Rd., plans by Smith-Pitts & MacPherson, 400 Alamo National Bldg., masonry mechanical shop, steel trusses, etc. $40,000.

Tex., San Antonio—FACTORY—Slats-O-Wood Fabricating Co., 3418 McKinney St., 100 x 200 ft. factory and 2 storage sheds. B. Cooke, 1504 Milam Bldg., archt.

B. C., New Westminster—BOTTLING PLANT—B. C. Distillery Co., Ltd., New Westminster, hygienic bottling plant and laboratory. $75,000.

N. B., East Saint John (Postal Dist. Saint John)—POWER PLANT—Saint John T.B. Hospital Bd., c/o Dr. J. R. Collins, East St. John, power plant. $40,000.

Ont., Bancroft—PLANT—Dominion Essential Oils Co., Ltd., Lakefield, reconstructing plant. $40,000.

Ont., Peterborough — PLANT — Beaver Lumber Co., Ltd., 78 N. George St., plant addns. $50,000.

Ont., Kirkland Lake—PLANT—Camdeck Gold Mines, Ltd., J. Kilgoer, mining engr., Kirkland Lake, mining plant, bldgs. $50,000.

Ont., Mitchell—PLANT—Stacey Brothers Ltd., Mitchell, condensed, preserved, evaporated milk, etc. plant. $60,000.

Ont., Weston—WORKSHOP, etc.—Weston Collegiate Bd., Weston, electric workshop, machine and motor mechanic shops, etc. $40,000.

Que., Belleterre—DIAMOND DRILLING—Lake Expanse Gold Mines Ltd., Belleterre, diamond drilling. $60,000.

Que., Cookshire — MILL — L. Beaudoin, Cookshire, woolen mill mfg. plant. $40,000.

Que., Giffard—PLANT—Prefabricated Construction, Inc., Giffard, prefabricated house and structure mfg. plant. $50,000.

Que., Montreal—FACTORY—St. Maurice Textiles, Ltd., c/o G. M. Webster, Laval-Sur-de-Lac, textile factory.

Que., Montreal—PLANT—Stanton Petroleum Products Ltd., c/o G. G. Hyde, 112 St. James St., plant. $50,000.

Que., Ste. Anne de Beaupre—PLANT—Societe Cooperative Agricole de Ste. Anne, Ste. Anne de Beaupre, vegetable and dairy products cold storage and processing plant. $40,000.

Que., St. Marc des Carrieres—STORAGE—Societe Co-operative Avicole de St. Marc, St. Marc des Carrieres, cold storage and processing plant for vegetables, etc. $40,000.

Que., St. Michel—PLANT—Societe Co-operative Agricole de Yamaska, St. Michel, cold storage and processing plant.

Que., St. Pie—PLANT—Yamaska Industries, Inc., St. Pie, insulated brick siding production plant. $40,000.

Sask., Moose Jaw — PLANT — Western Chemurgy, Ltd., Moose Jaw, starch and glucose from wheat mfg. plant. $50,000.

BIDS ASKED

Bids Asked About December 1

Tex., Houston—FREIGHT DEPOT—International Great Northern R. R. Co., C. S. Kirkpatrick, ch. engr., Union Station, 50 x 360 ft., rein.-con., brick freight depot. $100,-000. CD 10/31—ENR 11/2.

Bids Asked

★ **Colo., Denver**—DIESEL SERVICE—Chicago, Burlington & Quincy R. R. Co., H. R. Clarke, ch. engr., 547 W. Jackson Blvd., Chicago, Ill., 2 story, bsmnt., 45x150 ft. diesel service bldg. addn. First unit of $500,000 project. CD 10/21—ENR 11/2.

★ **Ill., Chicago**—REPAIR SHOP—Chicago Burlington & Quincy R. R. Co., H. R. Clarke, ch. engr., 547 W. Jackson Blvd., Zone 6, 1 story, 80x330 ft., brick, concrete, steel repair shop. $500,000.

Tex., Galveston—SHOP—Todd Dry Dock & Shipbuilding Corp., Pelican Dike, Galveston, steel, rein.-con. shop unit. $40,000. CD 11/3—ENR 11/9.

★ **Tex., Houston**—PLANT—Converted Rice Co., c/o Geo. L. Harwell & F. E. Mars, 2001 9 St., expan. rice production facilities incl. grounds development, water, addnl. plant bldgs., etc. $1,800,000.

Tex., LaPorte—PLANT CHIMNEY—E. I. duPont de Nemours & Co., LaPorte, 150 ft. rein.-con. chimney for chemical plant. Over $40,000.

Tex., Santa Rosa—ICE PLANT—Santa Rosa Ice Co., c/o C. C. Daniels, Edcouch, 2 story, ice plant, rein.-con. $40,000. CD 9/27—ENR 10/5.

CONTRACTS AWARDED

★ **Calif., Gardena**—PLANT—Rubber Reserve Co., 20021 S. Vermont Ave., styrene plant exten., to Stone & Webster Eng. Co., 20021 S. Vermont Ave., approx. $1,796,000.

Conn., East Hartford—LABORATORY—Pratt & Whitney Div., United Aircraft Corp., 400 Main St., 1 and 2 story, 135x140 ft., limestone, brick thermodynamics laboratory, to Turner Constr. Co., 38 Newbury St., Boston, Mass. Est. $160,000. Albert Kahn Associated Architects & Engineers, Inc., 345 New Center Bldg., Detroit, Mich., engr. Bids 10/31. CD 10/27—ENR 11/2.

Ill., Chicago—GARAGE, etc.—Freuhauf Trailer Co., 2553 Archer Ave., 1 story, brick, concrete garage and service station, to Collins Constr. Co., 912 Baltimore St., Kansas City, Mo., $100,000.

La., New Orleans—VEGETABLE SHED, etc.—Illinois Central R. R. Co., C. H. Mottier, eh. engr., 135 E. 11 Pl., Chicago 5, Ill., 50 x 192 ft., vegetable shed and stalls, steel, rein.-con., to R. P. Farnsworth & Co. Inc., 1515 S. Salcedo St., $40,000.

Mass., Watertown—PLANT—Hood Rubber Co., 98 Nichols Ave., brick plant addn., Nichols Ave., to Tredennick Billings Co., 10 High St., Boston, $66,000.

Minn., Minneapolis — FACTORY — Pako Corp., 1006 Lyndale Ave. N., general contract 2 story, 70 x 200 ft., brick, concrete, concrete block, factory addn., to Northwestern Constr. Co., 1401 3 Ave. S. Est. $50,000. E. J. Prondzinski, 949 Plymouth Bldg., archt.

Minn., St. Paul—WAREHOUSE—Groff Paper Co., 1049 Raymond Ave., general contract rebuilding 1 story, part bsmnt., 70 x 200 ft., concrete block, brick veneer warehouse, to Kraus-Anderson, Inc., 501 S. 8 St., Minneapolis. Total est. $60,000.

Mo., St. Louis — FACTORY — American Venetian Blind Co., 3515 Chouteau Ave., Zone 3, 1 and 2 story, 50x90 ft., brick factory addn., concrete fdn., to Elam Contg. Co., 5436 Gravois Ave., Zone 16. Est. $40,000 with equip. A. A. Aegerter, 5162 Waterman Ave., Zone 8, archt.

Mo., St. Louis—SALES and SERVICE STATION, etc.—H. Hafertepe, 700 Allen Ave., Zone 4, 1 story, 55x140 ft., brick, concrete automobile sales and tire service station, etc., addn., 704-6 Allen Ave., separate contracts under supervision O. S. Krieg, archt., 3624 S. Broadway, Zone 18. Est. $40,000 with equip.

Mo., St. Louis — TRUCK TERMINAL — Tucker-Hyman Truck Terminal, 1220 Hadley St., Zone 6, 1 story, 50x100 ft., brick truck terminal bldg., concrete fdn., to H. B. Deal & Co., Inc., 1218 Olive St., Zone 3. Est. $40,000 with equip. W. Hellmich, 1218 Olive St., Zone 3, archt.

O., Cleveland—FACTORY—American Metal Treating Co., J. L. Teegarden, pres., 1035 E. 62 St., rebuilding 1 story, 80 x 120 ft. and 40 x 80 ft., brick, steel factory bldgs., to J. L. Hunting Co., 9 and Chester Bldg. Est. $50,000.

O., Cleveland—PLANT—General Heat Treating Co., A. C. Landstrom, pres., 1529 E. 49 St., 1 story, 60 x 163 ft., heat treating bldg., steel frame, steel siding, to F. C. Pinyon, 1935 Euclid Ave. Est. $40,000. A. E. Rowe, 1900 Euclid Ave., engr.

Okla., Duncan—MACHINE SHOP—Halliburton Oil Well Cementing Co., E. P. Halliburton, pres., Duncan, machine shop addn., own forces. $40,000.

Pa., Chester — MANUFACTURING—Ford Motor Co., Chester, mfg. bldg., to Lauter Constr. Co., 112 S. 16 St., Phila., $75,000. Awarded 11/9.

Pa., Lancaster — MANUFACTURING — R.C.A. Victor Corp., Front and Cooper Sts., Camden, N. J., brick, protected metal siding mfg. bldg., to Turner Constr. Co., 1500 Walnut St., Phila., $75,000. Wenner & Chance, 1500 Walnut St., Phila., archts. Moody & Hutchinson, 1500 Walnut St., Phila., engrs. Awarded 11/8.

Pa., Phila.—PLANT—Philco Radio & Television Corp., Westmoreland and C Sts., mfg. plant, to F. V. Radomski, 244 W. Queen Lane. $40,000. Awarded 11/8.

Pa., Phila.—LOCKER—Reading Co., E. Y. Allen, ch. engr., Reading Terminal, Phila., Zone 7, brick locker bldg., to Wm. Linker Co., Inc., 2036 Arch St., $40,000. Awarded 11/10.

R. I., Phillipsdale—FACTORY—Ganteaume & McMullen, archts., 99 Chauncy St., Boston, Mass., brick, steel factory addn., warehouse, for Bird & Sons, Inc., Phillipsdale, to A. F. Smiley Constr. Co., 303 Main St., Pawtucket. Est. $40,000. Bids 9/21. CD 9/15—ENR 9/21.

Tex., San Antonio—WAREHOUSE—Central Forwarding Co., 1900 S. Flores St., concrete warehouse, to A. P. Rheiner & Son, 409 Insurance Bldg., approx. $40,000. Morris & Noonan, 801 American Hospital & Life Bldg., archts.

Tex., San Juan — FACTORY — Boehnke Shippers Equipment Co., Tri-Pak Machinery Co., Combes Hys., Harlingen, 1 story, brick,

INDUSTRIAL BLDGS. (Contracts Awarded, Cont'd.)

rein.-con. factory, day labor. $40,000. CD 10/31—ENR 11/2.

Wis., Milwaukee—BOILER HOUSE, etc.—Perfex Corp., 500 W. Oklahoma Ave., Zone 7, 1 story, 50x52 ft. boiler house, 3 story 45x100 ft. office bldg., rein.-con., brick, to Permanent Constr. Co., W. Capitol Dr. and N. 3 St., Zone 12. Eschweiler & Eschweiler, 720 E. Mason St., Zone 2, archts. Bids 10/17.

Ont., Toronto—FACTORY—Swift Canadian Co., Ltd., 1960 St. Clair Ave. W., 2 bldgs., part 2 and part 3 story, 67x113 ft., bone and glue factory, structural steel frame encased in concrete, 5 story, 30x60 ft. L-shaped, rein.-con., brick, steel tank house, to Carter Const. Co., Ltd., 419 Cherry St., **$130,000.** CD 10/11—ENR 10/19.

Sask., Regina—PLANT—Hi-Way Refineries, Ltd., 714 Broder Bldg., plant addns., to Poole Constr. Co. Ltd., 7-8th St. Est. **$60,000.** Van Egmond & Storey, Regina, archts. CD 8/31—ENR 9/14.

Man., St. Boniface—PLANT—Reisig & Schmid, 63 E. Notre Dame St., cold storage plant, to J. Schmid, P. O. Box 23, Fort Garry. Est. **$40,000.**

Que., Montreal—MILL—St. Lawrence Flour Mills, Ltd., 2110 W. Notre Dame St., mill exten., to Foundation Co. of Canada, Ltd., 1538 W. Sherbrooke St. Est. **$50,000.**

Que., Val d'Or—BREWERY—Northland Breweries, Ltd., Val d'Or, brewery, to R. Mongeau Constr. Ltd., 234 Catherine St., Ottawa, Ont. **$150,000.** CD 10/9—ENR 10/12.

UNCLASSIFIED

PROPOSED WORK

†Ariz., Kingman — BURST CONTROL RANGES, etc.—U. S. Eng., 751 S. Figueroa St., Los Angeles 14, Calif., rejected bids Oct. 24, burst control ranges, etc., at Kingman Airfield, Will readvertise. CD 11/1—ENR 11/9, under LB.

Arkansas — POWER LINES — Arkansas Power & Light Co., Simmons National Bldg., Pine Bluff, 67.2 mi. power line, Clark Co. $53,920.

Arkansas — SERVICE EXTENSIONS — Farmers Electric Cooperative Corp., Newport, service extens., Jackson Co. $50,006.

Arkansas—SERVICE EXTENSIONS—First Electric Cooperative Corp., Jacksonville, service extens. Pulaski Co. $75,000.

Arkansas — SERVICE EXTENSIONS — North Arkansas Electric Cooperative, Inc., Salem, service extens., Fulton Co. $50,000.

Arkansas—RURAL POWER LINES—Riceland Electric Cooperative, Stuttgart, 250 mi. rural power lines, Prairie, Monroe, Lonoke and Jefferson Counties, $225,000; 102 mi. rural power lines, Jefferson Co., $100,000.

Calif., Malibu — FISHING PIER — Malibu Pier Co., c/o Wm. B. Huber, 21,582 Paseo Serro, Pacific Palisades, revision fishing pier by widening 8 ft. and exten. seaward 260 ft., outer end to be 100 ft. wide for 80 ft. of length. Over $25,000.

†Calif., Vallejo—PLAYGROUND PAVING—Vallejo Unified School Dist. of Solano Co., Vallejo, approx. 36,000 sq. ft. 2 in asphaltic concrete on 2 in. crushed rock paving playground at Carquinez Heights School, Calif. 4-672-F. $6,075. **FWA.**

Colorado — TRANSMISSION LINES — Sangre De Cristo Electric Assoc., Inc., Salida, 72 mi. transmission lines, Chaffee Co. $72,000.

Conn., Waterbury—AIRPORT—City Planning Comn., City Hall, airport.

Georgia—SERVICE EXTENSIONS—Irwin County Electric Membership Corp., Ocilla, service extens., Irwin Co. **$50,000.**

Georgia—SERVICE EXTENSIONS—Ocmulgee Electric Membership Corp., **Eastman**, service extens., Dodge Co. $30,000.

Indiana — SERVICE CONNECTIONS — Parke County Rural Elec. Membership Corp., Rockville, service connections, Parke Co. $75,000.

Indiana—SERVICE EXTENSIONS—Rush County Rural Electric Membership Corp., Rushville, service connections, Rush Co. $50,000.

Ia., Denison—AIRPORT—City, A. Kregness, chn., surveys airport. $36,000 bonds voted. Carl Lechner, Ames, consult. engr.

Louisiana — SERVICE EXTENSIONS — Southwest Louisiana Elec. Membership Corp., Lafayette, service extens., Lafayette Parish. $60,000.

La., Lake Charles—ATHLETIC FIELD—G. Fletcher Tuttle, purch. agt., John McNeese Junior College, Lake Charles, rejected bids Nov. 8, athletic field. Will readvertise. Dunn & Quinn, 827 Hodges St., archts. CD 10/31—ENR 11/2.

†La., Lake Charles—RANGE FACILITIES—U. S. Eng., 25 St. and Avenue F, Galveston, Tex., range facilities. Over $15,000.

★**Md., Linthicum Heights**—AIRPORT—Office of Chief Engineer, City of Baltimore, Municipal Bldg., Baltimore, airport. $10,000,000. Bond issue approved.

Mich., Ludington — HANGAR — Bd. Supervs. Mason Co., Ludington, plans completed 72x908 ft., brick, steel, concrete hangar, at Mason County Airport. $45,000.

Minn., St. James—AIRPORT—City, C. A. Torkelson, mayor, airport. Over $25,000.

Minn., Tracy—AIRPORT—City, H. M. Alyger, clk., airport. Over $25,000.

†N. D., Valley City—AIRPORT COMPLETION—City, L. T. Halvorson, aud., field surveys completing municipal airport, incl. drainage, grading, runways. $232,500. CAA. CD 3/27—ENR 3/30.

O., Tiffin—SWIMMING POOL—City, A. B. Kerman, mayor, City Hall, voted bonds, swimming pool. $70,000.

Okla., Miami—SWIMMING POOL—City, R. E. Holland, mayor, preliminary plans made, swimming pool. $30,000. G. Stein, Miami, engr.

Texas—SERVICE EXTENSIONS—Swisher County Electric Cooperative, Inc., Tulia, service extens., Swisher Co. **$25,000.**

★**†Tex., Randolph Field** — AIRFIELD BLDG., etc.—U. S. Eng., Fort Sam Houston, addnl. bldg., $334,172; addnl. hard paving, incl. runways, taxiways, grounds development, etc. $1,000,000.

Tex., San Antonio—AIRFIELDS—City, City Hall, auxiliary airfield, off San Pedro Ave., $60,000; auxiliary airfield, off Olmos Park area, $50,000. T. H. Coghill, City Hall, engr.

Alta., Calgary—COMFORT STATION—Municipality, comfort station. $40,000. J. R. Wood, City Hall, engr.

B. C., Kelowna—SHIPYARD—A. J. Jones **Boat Works, Ltd., 259 Abbott St.**, boat building and repairs.

B. C., New Westminster—WHARVES—Westminster Paper Co., Ltd., New Westminster, wharves. $40,000.

B. C., Victoria—WHARVES—Dominion Govt., Ottawa, Ont., wharves at outer harber and the Gorge. $100,000. Dpt. P. Wks., Ottawa, Ont., engr.

Man., St. Boniface—RADIO STATION—Radio Saint Boniface, Ltd., c/o Dr. J. P. Howden, St. Boniface, radio station. $50,000.

Newfoundland, St. George's — POWER LINE—United Towns Electric Co. Ltd., St. John's, 100 mi. **13,000** volt power line to Port Aux Basque.

Ont., Hamilton—WADING POOL, etc.—Municipality, plans wading pool, grandstand and swimming pool in Mahony Park. $54,250. E. H. Darling, Hamilton Park Bd., Hamilton, engr.

Ont., Peninsula—WHARVES—Municipality, wharves. $30,000.

Ont., Kitchener—COMFORT STATION—Municipality, comfort station. **$30,000.** S. Shupe, City Hall, engr.

Ont., St. Thomas—SPUR LINE—Canadian National Rys., H. A. Dixon, ch. engr. (Oper.), **$60** McGill St., Montreal, Que., spur line. **$25,000.**

Ont., Sarnia—RADIO STATION—Sarnia Broadcasting Co. Ltd., c/o H. Mac D. Huestion, Sarnia, radio station. $50,000.

Que., Armagh—PLAYGROUND—L'Oeuvre des Terrains de Jeux d'Armagh, Armagh, playground. $25,000.

BIDS ASKED

Bids Asked After November 25

†Tex., Fort Worth — TAXIWAYS — Civil Aeronautics Admin., P.O. Box 1689, Fort Worth, Zone 1, taxiways, Meacham Field.

★**†Tex., Randolph Field**—RUNWAYS, etc.—U. S. Eng., Fort Sam Houston, exten. parallel northwest-southeast runways from 5,500 to 7,000 ft.; widening 4 taxiways, at each end of runways to 100 ft. widths; constructing 75 ft. taxiways adjacent to 2 asphalt aprons; 75 ft. widths shoulders for 2 runways for 7,000 ft. each; 240,000 sq. yd. heavy-duty concrete aprons, access taxiway with 12½ ft. shoulder; relocating, paving road, construct control tower; outside lighting sys., grounds development and sodding. Ser. No. W-41-154-45-56. Over $730,000. CD 11/10, 11/12—ENR 11/16.

LOW BIDDERS

†Arizona, Nevada—TRANSMISSION LINE—Bureau Reclamation, Parker Dam, Calif., Nov. 14, approx. 140 mi. Davis-Phoenix 161 kv. single circuit, wood pole, H-frame transmission line, Spec. 1080, from Larson Constr. Co., 3001 Welton St., Denver, Colo., **$278,657.** CD 10/24—ENR 10/26.

†Calif., Fairfield—HANGAR—U. S. Eng., 1209 8 St., Sacramento, Zone 8, Nov. 14, hangar at Fairfield-Suisun Army Airport. Spec. 981, from Peter Kiewit, Al Johnson & H. Everist, 604 Mission St., San Francisco, **$175,072.**

†Calif., Hamilton Field—AIR FREIGHT TERMINAL, etc.—U. S. Eng., 74 New Montgomery St., San Francisco, Zone 19, air freight terminal and air transport command, Job No. 1775-6, from H. H. Larsen Co., 64 S. Park St., San Francisco, $102,723.

★**Calif., Maywood**—AUTOMATIC SPRINKLER SYSTEMS—U. S. Eng., 741 Figueroa St., Los Angeles, Zone 14, Nov. 1, installing automatic sprinkler sys. in warehouses at Army Air Force Supply Depot, No. 45, from Hickman & Ritter, Charnwood Ave., Los Angeles, $839,111.

†Connecticut—DIKE—U. S. Eng., 121 James Ave., Boston, Mass., repair dike, 19-023-45-Neg-52, from D. V. Prigne & Co., Inc., 87 Foxon Rd., New Haven, $36,000. CD 11/14—ENR 11/16.

†Neb., Sidney—FIE WALLS—U. S. Eng., 909 17 St., Denver, Colo., Nov. 13, standard fire walls in eleven OS-1 warehouses, and wing walls on both ends of fire walls in Wh-6 warehouses, from Geo. Senne & Co., 510 E. 15 St. Topeka, Kan., $76,800. CD 11/8—ENR 11/16.

★**†W. Va., Wheeling**—AIRPORT GRADING, etc.—Bd. Comrs. Ohio Co., Ohio County Bldg., Nov. 9, grading, drainage, airport, from A. J. Baltes, Inc., 11 Oak St., Norwalk, O., **$290,805**; paving, from De Matteo Constr. Co., 200 Hancock St., Quincy, Mass., **$391,520.** CD 10/19—ENR 10/26.

CONTRACTS AWARDED

†California—SHIP MOORINGS—Yards & Docks, Navy Dpt., 18 St. and Constitution Ave. N.W., Wash. 25, D. C., ship moorings, San Francisco Bay, NOY 11236, to Master Puget Sound Constr. Co., 815 Paramount Blvd., Clearwater, **$27,341.**

★**†Calif., Moffett Field**—WIND TUNNEL—National Advisory Com. for Aeronautics, Ames Aeronautical Laboratory, Moffett Field, new wind tunnel and tunnel bldg., to Pittsburgh-Des Moines Steel Co., Neville Island, Pittsburgh, Pa., **$937,592.**

†Conn., Groton (br. New London) — SAFETY STRIPS—Yards & Docks, Navy Dpt., 18 St. and Constitution Ave. N.W., Wash. 25, D. C., safety strips adjacent to catapult, Naval Auxiliary Air Field, NOY 10975, to Campanella & Cardi Constr. Co., 50 Sprague St., Providence, R. I., $31,773.

Nebraska—TRANSMISSION LINE CONDUCTOR—Loup River Pub. Power Dist., Columbus, transmission line conductor, to Aluminum Co. of America, Power & Light Bldg., Kansas City, Mo., **$216,105.** Bid 11/2. CD 7/17—ENR 7/20.

Okla., Sand Spring—PIPELINE, etc.—Texas Empire Pipe Line Co., Phillips Bldg., Tulsa, 12 in. pipeline across Arkansas River, also dredging work in area, Anderson Bros., c/o Natl. Bank Commerce Bldg., Tulsa, **$86,000.**

Texas — ELECTRIC LINES — Stamford Electric Cooperative, Inc., Stamford, 11 mi. rural electric lines, Jones and Haskell Counties, to Stovall Contg. Co., Sherman, $31,[illegible] Est. $45,000. CD 10/31—ENR 11/2.

†Tex., Brownwood—BOUNDARY FENCING—U. S. Eng., Fort Sam Houston, 24,[illegible] lin. ft. boundary fencing, clearing, grubbing 350 acres, leveling, etc., at Camp Bowie, Ser. W-41-154-45-43, to A. L. Bucy, Brownwood, approx. **$25,000.**

Tex., Crockett—GAS MAINS—Lone Star Gas Co., 1915 Wood St., Dallas, 21 mi. 4-[illegible] 8-in. natural gas mains, to Anderson Bros., National Bank Commerce, Tulsa, Okla., and Crockett, Tex., **$70,000.**

Tex., Dallas — MAUSOLEUM — Hillcrest Mausoleum, N. W. Hy. and Hillcrest, Dallas, rein.-con., stone, marble mausoleum, bronze elevator, **1200 crypts**, etc., to Henger Const. Co., Dallas National Bank Bldg. **$150,000.** Fooshee & Cheek, 1901½ N. Harwood St., archts.

†Utah., Ogden—SPRINKLER SYSTEMS—U. S. Eng., 1209 8 St., Sacramento 8, Calif., sprinkler sys. in warehouses at UASF Depot, to Viking Automatic Sprinkler Co. and A. J. Eicholz, 216 Pine St., San Francisco, Calif., **$493,804.** Bids 11/6.

†Va., Langley Field—TEST TOWER—Natl. Advisory Com. of Aeronautics, S. Butler, county agt., Langley Field, helicopter test tower, West Field, Docket 119 (B), to C. W. Lockwood, Hampton, **$35,000.** CD 11/3—ENR 11/16, under LB.

★**†W. Va., Parkersburg**—AIRPORT IMPROVEMENTS—Clerk Wood Co., Court House, excavating for Parkersburg-Wood County Airport, to Ralph Meyers Constr. Co., P.O. Box 230, Salem, Ind. and Weaver Contg. Corp., 2100 E. 4 St., Sioux City, Ia., **$1,655,000**; concrete, to Williams Const. Co., Louise Ave., **Baltimore**, Md., **$380,000.** CAA. Bids 8/11. CD 8/16—ENR 8/17, under LB.

B. C., Westham Island—RADIO STATION—Dominion Govt., Ottawa, Ont., radio station, to Bennett & White Constr. Co. Ltd., 510 W. Hastings St., Vancouver. Est. **$25,000.** Dpt. Munitions & Supply, Ottawa, Ont., engrs.

Que., Montmorency Falls (Postal Box Quebec City)—DAM—Quebec Power, 220 St. Joseph St., Quebec City, reconstructing dam, to A. F. Byers Constr. Co. Ltd., 1226 University St., Montreal, **$100,000.**

Proposal Advertisements see p. 19